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# USSR Report

ECONOMIC AFFAIRS

EKO: ECONOMICS AND ORGANIZATION  
OF INDUSTRIAL PRODUCTION

No 8, August 1985



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9 December 1985

## USSR REPORT ECONOMIC AFFAIRS

### EKO: ECONOMICS AND ORGANIZATION OF INDUSTRIAL PRODUCTION

No 8, August 1985

Except where indicated otherwise in the table of contents the following is a complete translation of the Russian-language monthly journal EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA published in Novosibirsk.

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## EKO EDITOR REPORTS ON ECONOMIC CONSTRUCTION

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 8, Aug 85 pp 3-24

[Article by Academician A. G. Aganbegyan: "In the New Stage of Economic Construction"]

[Text] The forthcoming 27th Party Congress will occupy a special position in the history of our country. This is related first and foremost to the primary importance of the issues that are being brought up for discussion. The congress is hearing reports from the CPSU Central Committee on the central inspection commission and will select the central party agencies. At the same time it will adopt a new edition of the Program and will make changes in the party charter. On the agenda of the congress is a consideration of the Basic Directions for the Economic and Social Development of the USSR During 1986-1990 and the Future Up to the Year 2000. Thus the congress will determine not only the prospects for our country's development within the next 5 years, but also the strategy for development over the long-term period up to the year 2000 and also party program tasks in this responsible stage of improving the development of socialism.

The landmark significance of the 27th Party Congress is related to the nature of the period that is being experienced as well as to the innovation and the scope of the problems facing our society. It was precisely these peculiarities that were emphasized at the April (1985) Plenum of the CPSU Central Committee where a report entitled "On Convening the Regular 27th CPSU Congress and the Tasks Associated With Preparing for and Conducting It" was given by General Secretary of the CPSU Central Committee Comrade M. S. Gorbachev. The materials of the April Plenum play a special role for understanding the tasks facing our Soviet economy.

### A Time of Large Transformations

Speaking of the economy, as we know, we are experiencing a transition period in which the sources of economic development are changing radically. Up until recently our development was mainly of an extensive nature. Approximately two-thirds of the economic growth involved in listing additional resources (fixed production capital, capital investments, fuel, raw material, labor force) and only one-third was from intensive factors (better utilization of

resources, increased effectiveness of public production). Now the situation is changing and the 12th Five-Year Plan should be a five-year plan with a radical turn in the direction of intensification of the national economy. All this requires large transformations: the achievement of a new and better condition of the society, including the updating of productive forces, improvement of the system of production relations, profound changes in the sphere of labor, material and spiritual conditions for life, deepening of socialist democracy and self-government of the people.

The party is setting as a key long-range task the requirement to reach the leading scientific-technical positions and to achieve the highest world level of labor productivity. The possibility of such a qualitative change in the economy has been prepared for by all the preceding progressive development of the socialist national economy. Our country has an immense scientific-technical and economic potential. In terms of the volumes of utilized production resources--labor force, capital investments, fuel and raw material --the USSR has surpassed the United States and other developed capitalist countries. Just with respect to primary raw material and fuel the USSR consumes more than 5 billion tons annually. In terms of the scale of production we hold second place in the world (the volume of industrial national income in the USSR is 67 percent of the level in the United States). In terms of many areas of development of production and scientific and technical progress the USSR firmly holds leading positions in the world. The country has highly qualified personnel and specialists and first-class scientists.

Because of the advantages of socialism, a qualitatively different and higher way of life for the workers have taken form in the USSR. It is characterized by a lack of exploitation with a guaranteed right to work, concern for man on the part of society, a lack of unemployment and confidence in the future. This is a way of life that is based on stable improvement of the well-being of the people.

But there would be nothing more incorrect than to be satisfied with what has been achieved and not see the critical need for change. "In politics as well as in all social life, not to go forward means to be thrown backwards," V. I. Lenin taught us.

**There Can Be No Slowness. We Must Accelerate the Process of Socioeconomic Development**

Now the main task set for the forthcoming period is essential acceleration of social socioeconomic development. The need to bring this task to the fore is dictated by a whole number of objective circumstances. First, this includes acceleration which is necessary for further raising the standard of living of the Soviet people. Herein lies the highest meaning of all the development of the country's national economy. The higher growth rates of the national income will make it possible to realize the Food Program more quickly, to reach scientifically substantiated norms for nutrition, and to fill the market with various kinds of high-quality goods and services. It is toward this that the Comprehensive Program for the Development of Production of Consumer Goods and the Sphere of Services is directed. Providing each Soviet family with a

separate apartment or a well-arranged house and creating better cultural and domestic conditions as well as conditions for recreation, and also considerable improvement of health protection--all these are concrete goals related to the standard of living.

Second, acceleration of the country's socioeconomic development will make it possible to allot more funds for technical updating of public production, will provide for a changeover to a higher scientific and technical level and will facilitate the formation of the material and technical base for the developed socialist society.

Third, acceleration of socioeconomic development will make it possible to achieve decisive successes in economic competition with the United States and other developed capitalist countries and overcome more rapidly the historically accumulated differences in the level of labor productivity and other indicators of economic effectiveness.

#### Unfavorable Tendencies and Overcoming Them

In today's concrete conditions acceleration of socioeconomic development will be related to overcoming certain unfavorable tendencies in the national economy. As we know, the average annual rates of increase in the national income used for consumption and accumulation decreased from 7.2 and 5.3 percent under the 8th and 9th five-year plans to 3.9 and 3.2 percent under the 10th and during 4 years of the 11th Five-Year Plan. Moreover, beginning with the 9th Five-Year Plan the rates of economic development decreased as the increase in production resources slowed down. The increase in labor force employed in material production, the extraction of fuel and raw material and the volume of capital investments during these two five-year plans decreased approximately threefold. Because of the continuing demographics, difficulties with the labor force have not ceased, and because of the deterioration of the mining-geological and economic conditions for extracting minerals, especially in the area of the production of fuel and raw material, it can be expected that the increase in resources will slow down somewhat. These losses should be covered by additional acceleration of the rates of increase of the effectiveness of public production.

When speaking about the unfavorable tendencies in the country's economic development, one should especially note the fact that they increased during the period of 1979-1982 when there was an essential reduction of the growth rates of industrial production, the volumes of production of agricultural products did not increase, the operation of rail transportation deteriorated and many construction ministries did not fulfill their plan for the introduction of objects. As a result of the decisions of the November (1982) Plenum of the CPSU Central Committee, which took place under the leadership of Yu. V. Andropov, it was possible to step up the work of many units of the national economy, to improve order and discipline and to achieve certain positive changes. As a result of the accelerated growth of labor productivity the rates of industrial and agricultural production increased, the operation of rail transportation improved, during 1983-1984 the real per capita incomes increased by 5 percent, and the plans for housing and social-domestic construction were overfulfilled.



But, as was noted at the April Plenum of the CPSU Central Committee, the difficulties are far from being overcome. This is apparently related to the fact that the positive changes were achieved mainly as a result of reducing losses and mobilizing reserves and possibilities that lay on the surface. The deeper reserves and possibilities which are related to the improvement of the organizational structures, the system of management and acceleration of scientific and technical progress were essentially not put to work. Therefore the positive changes were not stable in nature and there were declines during individual months. The severe winter at the end of last year and the beginning of this year added to the difficulties. In the first quarter of this year the increase in industrial output was only 2 percent (as compared to 4.2 percent during 1984 as a whole). Builders and transportation workers did not fulfill their plans. The rates of increase in labor productivity dropped. In subsequent months the situation improved but there is still much to do before the end of the year in order to make up for what was lost during the first month and to fulfill the annual plan.

At the April Plenum of the CPSU Central Committee they analyzed in depth the question of the causes for all of the aforementioned difficulties in the country's economic development. The main reason is that they did not promptly and properly evaluate the changes in the objective conditions for the development of production, the need for acceleration of its intensification, the changes in the methods of management and, especially important, they did not exhibit persistence in their development and implementation of large measures in the economic sphere. A certain amount of influence was exerted by natural and climatic conditions and a number of external factors.

From this analysis the most serious conclusions were drawn concerning the need to change the national economy over to the path of intensive development. At the same time the principal paths for solving the problem were indicated:

immediate mobilization of the organizational-economic and social reserves and possibilities as a result of more efficient management in all areas of the economy, which presupposes increasing organization and discipline everywhere and decisively improving the style of activity;

radical acceleration of scientific and technical progress and extensive utilization of the achievements of the scientific and technical revolution, which are inseparably related to rearranging the structural and investment policies;

decisive improvement of product quality as the only reliable path to more and more complete satisfaction of the country's demands both for means of production and for objects of consumption;

correspondence of the forms of socialist management with modern conditions and demands, which presupposes restructuring of the economic mechanism.

Thus an answer was given to the key question: how and with what the country can achieve acceleration of economic development.

## A Tactical Lever--Better Organization of Work

A most immediate task is more effective utilization of that immense production potential which we have at our disposal. Here primary attention should be devoted to activating the human factor and reaching a point where everyone in his own place works with a full return. Numerous examples, including those which are published in almost every issue of EKO, show the immense possibilities which make it possible in a short period of time to considerably increase labor productivity, to economize on fuel and raw materials, and to improve the indicators of output-capital ratio and the effectiveness of capital investments. Such reserves exist in every economic organization and if we deal with them properly and skillfully utilize the interests of the labor collective, it is possible to achieve significant improvement.

We shall refer to fairly typical examples in industry, construction and agriculture.

The first example pertains to the coal industry. It is known what a difficult position this branch is in, where for almost 10 years the volume of extraction has not increased in spite of increasing capital investments. Moreover there is a considerable reduction of the extraction of coal in mines, which is becoming greater in open pit mines. What has been said pertains to the Kuzbass, where mine extraction of coal is also being curtailed. The Nogornaya mine fell into the typical and fairly difficult situation in the Kuzbass. It is located near Novokuznetsk, where the director is Hero of Socialist Labor V. M. Yerpylev. The mine has exhausted the rich beds and has been forced to change over to the extraction of coal from thin strata where the productivity of labor is lower and production costs are higher, but the main thing is that there is no possibility of extracting as much coal as before. But the collective of the mine and its director would not put up with this situation. They moved the new mining developments to 17 kilometers away from the mine and exhibited initiative by developing and realizing their own plan, to a significant degree through the internal method (all of the surface structures were constructed through the efforts of their own miners). The new section was quickly put into operation, with only 11 million rubles having been spent on it. The annual extraction of coal in the new section was increased to 1.6 million tons and thus they made up for the decline in the extraction at the old mine. Having further developed the movement for a creative search for reserves of labor productivity, the mine doubled the average indicator of labor activity of the mines of the Kuzbass and reach an amount of 120 tons a month per worker. This was achieved because of the fact that the entire collective was directed toward improving technical equipment and technology which was adapted to the concrete conditions of the mine. For example, they suggested their own devices for mechanizing a number of labor-intensive jobs, including for installing the coal complex directly in the drift, as a result of which it was possible to cut the assembly time to one-third the normal amount. Consolidated brigades headed by experienced brigade leaders were formed in the mine instead of the multitude of traditionally small, less effectively working brigades. In spite of the difficulties of simultaneous work at two sections that are located far away from one another, the Nagornaya mine regularly overfulfills the plan, is improving its indicators and has favorable prospects for development.



Another example. In the area of construction, as we know, there have been serious difficulties. The plan for the introduction of production capacities under the 11th Five-Year Plan was fulfilled at the level of approximately 85-90 percent, as in previous five-year plans. But as distinct from previous five-year plans, under the 11th Five-Year Plan there was less of an increase in the volume of construction and installation work and labor productivity in construction during the 4 years increased less than called for by the assignments of the five-year plan. The majority of construction ministries are failing to fulfill the plan for contracting work and are not carrying out special tasks. Among the builders labor turnover is 1.5 times as great as in industry, and the majority of organizations are experiencing a chronic shortage of labor force and are forced to extend the time periods for construction and enlist labor force from industry and other branches during the final stage of construction. The facilities are released with incomplete work since there are not enough workers to complete them well.

The activity of the organizations of the Ministry of Construction for Petroleum and Gas Industry Enterprises stands out impressively from the general state of affairs. In 4 years of the five-year plan the volume of construction and installation work here increased by 2.2 billion rubles, that is, by more than the annual program of a number of union construction ministries, and in 1984 it reached 6.5 billion rubles. During the 3.5 years of this five-year plan more was done than was done during all of the 10th Five-Year Plan. The ministry fulfilled the assignments for labor productivity for the 11th Five-Year Plan in 3 years. The main reason for the success was the changeover to the new system of management with a simultaneous improvement of technical equipment and technology for construction. A large role was played by the formation of comprehensive technological groups in pipeline construction as the main lower level economic organizations. While in the past each group laid 45-46 kilometers of pipeline a year, the comprehensive technological groups which were changed over to the collective contract began to release for testing an average of more than 150 kilometers of prepared pipelines a year. And while previously a comparable volume of work was done by some 400 to 450 people, today it takes 220-230. The average monthly earnings per one worker in these contracting groups exceeded the indicators with traditional labor organization 1.8-fold. Such a quantitative leap was related significantly to the fact that they had found an efficient organizational form of management which was reinforced by effective stimulation of labor for the final results.<sup>1</sup>

Largely because of the acceleration of the construction of gas lines, by 1 May 1985 the ministry had already fulfilled the five-year program with the introduction of six large gas lines from Urengoy to the central and western regions of the country. We emphasize that the results we have indicated are high world achievements both in terms of scale and in terms of the time period for construction.

The third example is in the area of agriculture. During 4 years of the five-year plan the volume of agricultural production in the USSR increased by 11 percent, and labor productivity in the public sector--by 12.1 percent. Moreover there was a considerable increase in the capital-output ratio and the

capital intensiveness of the agricultural products and their production cost increased since the payment for agricultural labor increased twice as rapidly as labor productivity did. Against this overall background the results of the work of the Put k Kommunizmu Kolkhoz in Kosikhinskiy Rayon in Altay Kray look quite different. There, with the support of the kray organizations and on the initiative of the kolkhoz itself, with the help of the Institute of Economics and Organization of Industrial Production of the Siberian Branch of the USSR Academy of Sciences, they are conducting a socioeconomic experiment directed toward mobilization of the organizational-economic and social factors in increasing effectiveness. The experiment has been in progress for 3 years. During this time in all subdivisions here they have introduced collective forms of organization and payment for labor. The organized units are directed toward the final results of their work, have been changed over to a contract and are on complete cost accounting using checkbooks. The teams have been organized everywhere, including for management of the kolkhoz and for all of its services, which are related to clear responsibilities and they receive payment for the results of their work. Interrelations with the rayon Selkhoztekhnika have been arranged on this same cost-accounting basis.

All this made it possible in 3 years of work again to increase the volume of agricultural production on the kolkhoz by 58 percent, to increase the output-capital ratio by 55 percent and labor productivity--by 34 percent, and also to reduce the production cost of agricultural products by an average of one-third. While before the experiment the kolkhoz was operating at a loss, in 1984 it received 1.2 million rubles in profit, more than doubled the productivity of grain crops, increased the milk yield per cow by approximately 200 kilograms, significantly strengthened labor discipline and reduced absenteeism. And all this was done without additional capital investments in this kolkhoz and without assistance from state organizations, by the same collective and with the same management, exclusively through mobilizing internal reserves and possibilities. When sorting out this experience in detail we came to the conclusion that in its basic features it is quite applicable to the industrial enterprise or any other economic organization.

As we can see, there are many possibilities of accelerating economic development through mobilization of organizational-economic and social factors and conditions. According to the instrument of economists, as a result of these factors it is possible to increase the rates of growth of labor productivity and other indicators of effectiveness 1.3-1.5-fold. Incidentally, this is clearly shown by our country's experience during the period of conducting the economic reform of 1965, when we managed as a result of internal reserves to accelerate the growth of the effectiveness of production in the country 1.5-2-fold. Let us recall that the growth rates of productivity of public labor have increased from 28 percent under the 7th Five-Year Plan to 39 percent under the 8th. This is also shown by the experience of other socialist countries during those periods when they have consistently and without deviations conducted a course toward better utilization of existing resources as a result of improvement of the economic mechanism.

## A Strategic Lever--Scientific and Technical Progress

At the April Plenum of the CPSU Central Committee it was emphasized with all possible force that the party is setting forth as the main strategic lever for intensification of the national economy cardinal acceleration of scientific and technical progress.

The statement of the problem concerning evolutionary and revolutionary paths of scientific and technical progress is new. The evolutionary path involves improvement of existing technologies and partial modernization of machines and equipment. And although this path produces an appreciable return, this return is relatively small and is measured in percentages. So far scientific and technical progress in our country has been mainly evolutionary and has been proceeding without vigor. We cannot put up with this. A task has been set to change over to revolutionary strides in scientific and technical progress, which presupposes the introduction of principally new technological systems that are based on the latest generations of technical equipment and produce the highest effectiveness.

The party is devoting attention to a new object: technological systems and not individual kinds of technical equipment. Systems, which embrace the entire production process from beginning to end and include an interconnected chain of machines and equipment, and which are directed toward the final results. The changeover to these modern technological systems, as practice shows, makes it possible to increase labor productivity and to improve other indicators of the effectiveness not in percentages, but in hundreds of percentage points. It is known, for example, that the changeover to each new generation of electronic computers marks an increase in the speed of computers by at least 100 percent with a 5-10-fold reduction of expenditures per unit of computer capacity or per unit of information contained in it. The changeover to flexible productions and systems of machines increases labor productivity 3-5-fold. The introduction of rotary and rotary-conveyor lines increases effectiveness 5-10-fold and more. Reduced-stage chemical technologies also mark revolutionary changes in the effectiveness of production. The expenditure of fuel is reduced to an average of two-thirds the previous amount when diesel fuel is used for automotive transportation; energy-intensiveness is cut in half and labor productivity is quadrupled when one changes over from Marten furnace production of steel with casting in molds and preliminary rolling on blooming mills to oxygen converter production with continuous casting of steel. Labor productivity is tripled when one changes over from traditional methods of extracting coal in mines to hydraulic technology, as is shown by the experience of the mines of the Kuzbass.

One can give examples like these in all spheres of production.

In order to make these revolutionary changes for the better in scientific and technical progress, it is necessary to update and reequip all branches of the national economy on the basis of modern achievements of science and technology. To do this a task has been set under the 12th Five-Year Plan to additionally increase the coefficient of replacement of equipment. The crucial nature of this problem is related to the fact that the country's production apparatus during the past period has been updated slowly and is



progressively aging. On an average per year now only 1.8 percent of the overall value of fixed production capital in the country is being replaced, which is one-half to one-third the amount that should be.

In order to considerably increase the coefficient of replacement of equipment, it is necessary to resolutely accelerate the rates of development of machine building and to make this a priority. At the April Plenum of the CPSU Central Committee the task was set to increase the growth rates of machine building 1.5-2-fold under the 12th Five-Year Plan. Let us recall that during 4 years of the 11th Five-Year Plan the overall volume of machine-building production in the country increased by 26.2 percent, or an average of 6 percent per year.

A central task which is facing machine building is changing over more rapidly to the production of new generations of machines and equipment which are capable of providing for the introduction of progressive technologies, increasing labor productivity many times over, reducing material-intensiveness and increasing the output-capital ratio.

There is the opinion that technical progress is inevitably linked to a reduction of the output-capital ratio, since the new machines and equipment, which are filled with electronics, are very expensive. For example, a processing center which when programmed can perform 20 and more metal-processing operations, costs 100,000-200,000 rubles and more per unit. The ordinary universal machine tool, which can perform only one operation, costs only a couple of thousand rubles, that is, roughly one-100th as much. But two lines of processing centers (with four to five units each) on which a flexible production system is constructed, replaces in productivity a large shop consisting of universal machine tools. If these processing centers are also used on one or even two shifts, the output-capital ratio drops severalfold as compared to the old technology. But if this expensive equipment is used the way it should be--on a continuous sliding schedule throughout the entire 24-hour period--then the output-capital ratio even without including the savings on capital investments on buildings and structures increases 1.5-fold. But to do this the processing centers must have high durability and the flexible production systems must have a high degree of automation which enables them to work at night automatically, without the intervention of people, who do all the work for repair and service and also fueling the flexible production system on the first shift and part of the second.

The output-capital ratio can increase even more when they change over to a new generation of equipment in the chemical industry, in ferrous metallurgy, and in automotive transportation (especially if one takes into account the savings on capital investments with the reduction of fuel expenditure). Among the branches of machine building primary attention from the standpoint of technical progress should be given to improvement of machine tool construction, and the acceleration of the development of computer equipment, instrument building, electronics and electrical equipment--the catalysts of scientific and technical progress.

## The Conductor of Progress--The Engineer

At the April Plenum of the CPSU Central Committee a large question was raised concerning the prestige of engineering labor. In light of the requirements of the scientific and technical revolution one cannot recognize it as normal to reduce the prestige of engineering labor. The average wages of engineers 20-25 years ago were 1.5-2 times higher than the wages of workers. But now in construction even on an average they are lower than those of workers, and in industry the average earnings of these categories of employees are practically the same. While technical reequipment for the labor of workers has increased 3-4-fold during this time, the technical availability for the labor of designers and technologists, not to mention other categories of engineers, has changed little. Only in certain leading enterprises are they beginning to introduce a system of automated planning and designing, and they are more and more extensively using computers for calculations of technological processes. There has also been weak development of experimental productions where the ideas of engineering labor are tested. At the same time there has been an immeasurable increase in the flow of paper, it has become necessary to have numerous kinds of coordination, and the complexity of planning and design documentation has increased. The very concept of "engineer" has been dissolved among a large number of related positions and has lost its clear initial meaning. Today the task has been set of increasing the role and authority of masters, engineers, designers, and technologists, and increasing the material and moral stimuli for their labor. The first step in this direction has been taken--the Politburo of the CPSU Central Committee has considered the question of improving the system of wages for scientific workers, designers and technologists. The salaries for designers and technologists have been increased somewhat and, moreover, managers have been given the right to introduce increments to these salaries, taking into account the personal creative contribution of the engineer.

### What Kind of Steps Should Be Taken?

A new stage of the scientific and technical revolution is developing before our very eyes which is typical of organic combinations of industrial technologies and microelectronics. The solutions to many concrete problems involved in restructuring our production apparatus lie in this particular area. The dynamism and flexibility of this restructuring are given as indispensable conditions for the acceleration of the country's socioeconomic development. Here the party gives an important reference point: to reach the leading scientific and technical positions and to achieve the highest level of productivity of public labor in the world. Keeping these reference points in mind, we must consider in a new way each innovation each plan for reconstruction or new construction, and also the plans for the development of entire branches of production. If one takes the problem as a whole, as we know, labor productivity in the USSR national economy is now 40 percent of the level of labor productivity in the United States. Without taking agriculture into account, our labor productivity is about half that of the United States and about two-thirds that of the other developed capitalist countries.

It is no accident that we mentioned the problem of agriculture. The natural and climatic conditions of our country as a whole are much worse than those in

the United States and other developed capitalist countries. A considerable part of the planted areas in the USSR are in the zones with inadequate moisture, and some of them are even in the zones where farming is carried out at a risk (the danger of drought). Moreover the sum of effective temperatures (temperatures above +10 degrees, which is necessary for the ripening of agricultural crops) on a considerable part of the USSR territory is also lower than in many other countries. All this leads to the so-called bioclimatic coefficient which characterizes the ripening of the vegetative mass during the summer season in the main agricultural regions of the USSR which is two-thirds to one-half that found in the United States and a number of other developed capitalist countries. Related to this to a certain degree is the fact that labor productivity in USSR agriculture is one-fourth to one-fifth that in the United States while in industry we lag behind by less than one-half with respect to this indicator.

During the past 20 years labor productivity in the United States and the European capitalist countries has been increasing by an annual average of approximately 2.5-3 percent. Taking into account the aggravation of the capitalist contradictions, one can hardly expect more rapid growth in the next period. Therefore, in order to reduce the differences in the levels of labor productivity, we will have to increase its rates in the national economy from approximately 3-3.5 percent under the 10th and 11th five-year plans to at least 5 percent and then to 6 percent per year. It is easy to calculate that under these conditions by the year 2000 our country will outstrip the European capitalist countries in terms of the level of labor productivity and will come right up to the indicators of the United States.

#### Quality and Again Quality!

At the April Plenum of the CPSU Central Committee the point was again clearly formulated that improvement of product quality should be at the center of the entire economic policy. Quality and again quality--this is our slogan today. Only by solving the quality problem is it possible to solve the problem of quantity. Although questions of improving product quality have been raised repeatedly before, such great attention to this key problem of our management is especially important today. It must be understood that quality is the generalizing indicator of effectiveness. Material resources and public labor which are expended on poor-quality products, not to mention rejected products, are resources that are spent in vain, for the products have not satisfied public demands. The higher the quality, the more complete the satisfaction of these demands. Therefore improving quality is the only reliable path to overcoming the shortages in the national economy.

The problem of quality can be seen especially clearly if one considers the product throughout the entire course of its life cycle. Take, for example, machines and equipment. After all, the matter does not end with the expenditures of energy, materials and labor which are invested in the machines that are created. Then, during the period of operation, any machine requires the expenditure of more resources. And here is what happens. If one takes, for example, a tractor or a car, the expenditures on their production amount to only about 3-4 percent of the total expenditures which are made by the society during the period of operation of these cars and tractors during their



entire life cycle. These are expenditures on service, current and capital repair, and a number of other things. Operational expenditures depend most directly on product quality. Having expended, for example, more than 50 rubles on a model of the new Minsk tractor and having improved its reliability during the process of operation, we obtain an annual saving of 500 rubles! And this is a fairly typical example.

Therefore high quality is a decisive factor in increasing the effectiveness of public production.

Inseparably linked to the problem of quality is the problem of batching products, above all, machines and equipment. Machine tools without instruments and fittings cannot be effective and until the plant that has purchased the machine tools produces instruments and fittings through its own efforts the machine tool simply stands there and is not used. This pertains to an ever greater degree to electronic computer equipment if it is delivered without the necessary punchcard equipment and complete mathematical software, as is sometimes the case.

Technical equipment has high quality when it is delivered in a set and can be put to work immediately. A tractor, as a rule, should be delivered with trailers and mounted implements, a machine tool--with instruments, fittings and program support (if it is a machine tool with numerical program control), and so forth. There are possibilities of improving product quality everywhere. But in order to radically improve the quality, and this is the task at hand, it is necessary, of course, to do a large amount of work for improving the product itself and the technology of its manufacture, for increasing the skills of the personnel, and a system of planning, management and incentives should be especially directed to this.

Only on the path of improving product quality will we be able to solve the fundamental problems of improving the entire system of management and actually place production in the service of satisfying social needs.

#### Toward an Integrated System of Management of the Economy

The April Plenum of the CPSU Central Committee raised to its full height the question of restructuring the economic mechanism. As we know, a good deal has been done in this area in recent years. Work has become more active both in the central agencies and in the local areas. A large-scale experiment is being conducted for expanding the independence of associations and enterprises and increasing the responsibility for the final results of production, and collective forms of organization and stimulation of labor are being developed. At the same time the return from each piece of work is still relatively small. We have reached a point where it is necessary to move on from experiments to the creation of an integrated system of management and control. And to do this, as was emphasized at the plenum of the CPSU Central Committee, it is necessary to begin practical restructuring of economic management. The general concept of this restructuring is clear: while continuing to develop the centralized basis in solving strategic problems, it is also necessary to move more boldly forward along the path of expanding the rights of enterprises and their independence, to introduce cost accounting, and on the basis of this

to increase the responsibility and the interest of labor collectives in the final results of their labor.

In recent years, as we know, there has been a significant increase in the rights and responsibilities of local agencies of Soviet power in economic construction. The April Plenum of the CPSU Central Committee set the task in this area of expanding the rights of local agencies and strengthening their initiative and interest in the development of production, use of resources and expansion of the entire sphere of services to the population. In the local areas they should be fully responsible for solving all problems pertaining to competence and should rid themselves of dependent attitudes more quickly.

Questions of improving the system of planning and management were raised in a new way at the April Plenum of the CPSU Central Committee. It raised as a practical task the restructuring of the work of the upper echelons of management so as to direct them primarily toward solving long-range socioeconomic and scientific-technical problems. Trivial regulation and excessive paper work were subjected to severe criticism. In this connection they set the task of approaching the improvement of the organizational structure of management, eliminating superfluous units, simplifying the apparatus and increasing its efficiency. It was stated directly that certain units of management have become an impediment and only retard movement. It is necessary to sharply limit the number of instructions, provisions and methods, which sometimes, by arbitrarily interpreting party and government decisions, restrict the independence of the enterprises.

#### Collective Forms of Organization and Stimulation of Labor--The Path to Effectiveness and Production Democracy

An important point made at the April Plenum of the Central Committee was the requirement to link the measures for improving the system of management from above to the development of collective forms of organization and stimulation of labor from below. This same idea was expressed at the meeting held in April in the CPSU Central Committee with economic managers, members of brigades, specialists and scientists. Carrying out this idea will require bringing the principle of cost accounting to all primarily labor cells and increasing the activity of the workers. This point is very important since the large-scale experiment has been conducted with a certain amount of separation from the movement of the workers themselves for changing over to brigade forms of organization and stimulation of labor.

In places where they have managed to provide unity in the conditions of management and collective forms of organization and stimulation of labor, they have achieved serious results. In this regard, the experience of 15 Novosibirsk enterprises and organizations is interesting. Here in 46 shops, sections and divisions they introduced collective forms of organization and stimulation of labor which encompassed not only workers, but also managers and engineering and technical personnel. On the whole during the year of the experiment (1984) in these sections labor productivity increased by 15 percent (the average for all the other sections was about 4 percent), and wages in the experimental sections increased by 6 percent (the average--2 percent).

As we can see, even the coefficient of the greater growth of labor productivity over wages turned out to be higher in sections with collective forms of organization. There was an especially marked increase in labor activity--20-30 percent and more--in those shops and sections where collective cost accounting and the collective contract as well as more progressive forms of organization and stimulation were introduced. This experiment and also the cases mentioned above of changing comprehensive technological groups of the Ministry of Construction of Petroleum and Gas Industry Enterprises to collective forms of contract with direction toward the final result again shows the high viability and effectiveness of this important direction for improving the economic mechanism.

At the meeting in the CPSU Central Committee with economic managers it was especially emphasized that collective forms of organization and stimulation of labor, in addition to their great economic content, have important social significance for they are forms of self-management of the workers, an expression of economic democracy and the extensive participation of the working masses in management. Here in today's party documents one can trace the deep continuity with the positions of V. I. Lenin when he wrote about the program task of transforming agencies of authority from agencies "for the workers" into agencies of management "through the working masses."<sup>2</sup> The same idea was formulated by K. Marx as "management of the people through the people themselves."<sup>3</sup> The ever-improving forms of productive organization of labor can and should become a school for this kind of management.

"The development of the Soviet society will be determined to a decisive degree by the qualitative changes in the economy..."--it was said at the April (1985) Plenum of the CPSU Central Committee. It is precisely the economy that is the field where the main battle of our time takes place: the world battle for high effectiveness of management, for granting each individual broad possibilities of developing his own creative forces and, to the extent of these forces, participating in further improvement of our society. Such is the present stage in economic construction.

#### FOOTNOTE

1. The organization of labor in large comprehensive groups was analyzed at the "round tables" of two magazines--EKO and STROITELSTVO TRUBOPROVODOV. The materials were published in the magazine STROITELSTVO TRUBOPROVODOV, No 3, 1985 and a more detailed presentation is being prepared for publication in one of the next issues of EKO.
2. See Lenin, V. I., "Poln. Sobr. Soch." [Complete Collected Works], Vol 38, p 170.
3. Marx, K., and Engels, F., "Soch." [Works], 2nd ed., Vol 17, p 350.

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#### ORIGINS OF STAKHANOVITE MOVEMENT RELATED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 8, Aug 85 pp 25-28

[Article: "A Powerful Factor in the Development of Productive Forces"]

[Text] With the blows of his pneumatic drill during the night of 31 August 1935 the miner of Donetsk Mine "Tsentralnaya-Irmino," Aleksey Stakhanov, opened up a new epoch in socialist competition--the movement for revolutionary growth rates of labor productivity on the basis of new technical equipment.

The Stakhanovite movement shattered the customary ideas about output norms and production possibilities. It was accompanied by that new attitude toward labor which A. M. Gorkiy called a fiery explosion of mass energy. The Donetsk miner, who broke the world record for production with a pneumatic drill, and his followers in all branches of the national economy showed the colossal potential capabilities that lie in socialist competition when the labor enthusiasm of the masses rests on new technical equipment. The operation of 284 machine tools instead of 26 by the Ivanovo weavers Yevdokiya Viktorovna and Mariya Ivanovna Vinogradova, the doubling of the scheduled speed of cargo trains by the steamship mechanic Petr Fedorovich Krivonos, the forging of 10 times as many crankshafts as the blacksmith of the Gorkiy Automotive Plant, Aleksandr Kharitonovich Busygin--these are the facts on the basis of which at the first all-union conference of Stakhanovite workers in 1984 it was noted that the Stakhanovite movement "shatters old views about technical equipment, shatters old norms, old planning capacities and old production plans, and requires the creation of new and higher technical norms, planning capacities and production plans. It is called upon to carry out a revolution in our industry. This is precisely why it, the Stakhanovite movement, is at its basis deeply revolutionary."

The Stakhanovite movement was clearly embodied in Lenin's words to the effect that only socialism creates the possibility of applying competition on a truly mass scale and drawing the real majority of workers into the arena of this work where they can prove themselves, develop their capabilities and discover the talents which among the people are an untapped spring and which capitalism has trampled, oppressed and suffocated by the thousands and millions. At the dawn of the new system, in December 1917, when the republic of the soviets, hemmed in by the fiery ring of enemies from outside and inside, made its first



steps, V. I. Lenin pointed out that one of the important conditions for reorganizing the country's economy on the basis of socialism is the organization of socialist competition.

Socialist competition has entered firmly into our lives as a method of socialist construction, as a powerful factor in the development of productive forces. Time makes it possible to evaluate the influence of the Stakhanovite movement on all aspects of social life, including on the development of socialist competition. Today we speak of this movement not only as a remarkable fact and a landmark in the history of the development of socialist competition. The traditions and principles of the Stakhanovite movement have not lost their significance even today. On the contrary! During the period of intensification of production and strengthening of influence of scientific and technical progress on the economy they have acquired special value.

The technical equipment that is used by today's generation of workers would seem fantastic to Aleksey Stakhanov and his followers. But frequently this new technical equipment does not produce the revolutionary leap in the growth of labor productivity which was intended from it. Machine tools and presses with programmed control on the basis of the latest achievements of electronics should increase labor productivity 10-15-fold. But sometimes the return they produce is comparable to that of equipment which is controlled by hand. In the coal industry the pneumatic drill of Aleksey Stakhanov's times has been replaced by mechanized complexes. But when they are not placed in the conditions for which they are intended, they do not produce any radical increase in labor productivity. This was convincingly discussed at the meeting of the round table of the EKO editorial staff in conjunction with the Ukrainian Trade Union Council, the Institute of Economics of the Ukrainian SSR Academy of Sciences and the magazine SOTSIALISTICHESKOYE SOREVNOVANIYE, which was conducted on the threshold of the 50th anniversary of the Stakhanovite movement in the republic's capital, which was the birthplace of this movement.

While noting the records of the Stakhanovites, which depended on technical equipment which was new for the time, we must not forget something else without which it could not have taken place--organization of labor and production in a new way. Behind each such labor achievement lies a significant amount of organizational and technical preparation. And here today at many enterprises the level of organization of production and management does not stand up to the requirements of the day. And, finally, one must note an important distinction which is inherent in the organization of socialist competition during the period of developed socialism when intensive growth factors must prevail. There has been an immeasurable increase in the scale of production, the technical level of the products has risen, and production interconnections and technological processes have become more complicated. What is becoming decisive are not individual achievements, but the overall final result obtained with the least possible expenditures. Unfortunately, certain enterprises are still oriented toward intermediate results and quantitative indicators.

Socialist competition becomes a powerful factor in the development of the economy when all principles of its organization operate together--publicity, comparability, results, and the possibility of practical repetition of

experience. Yet people sometimes forget about this. Sometimes an excessive amount of attention is devoted to methods of summing up the results of the competition, the evaluation of the results becomes complicated, the number of indicators increases unjustifiably and then the principle of comparability is violated. Many organizers of competition forget about that main thing which comprises its core--the need for practical repetition of experience--limited their activity to the stage of summing up the results. A great deal of harm is caused to socialist competition by formalism and a bureaucratic approach to its organization, when the commitments are written with carbon paper and are only given to the participants for their signature, when there is a striving to respond to all initiatives without taking into account the work of the enterprise. V. I. Lenin strictly warned "against any kind of perfunctoriness or attempts to establish uniformity from above" in socialist competition.<sup>2</sup>

We are thinking about all of the aforementioned problems with concern today, recalling with gratitude those who stood at the sources of the new, socialist attitude toward labor.

#### FOOTNOTES

1. See Lenin, V. I., "Poln. Sobr. Soch." [Complete Collected Works], Vol 35, pp 195-196.
2. Ibid., Vol 35, p 203.

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## LENIN ON SOCIALIST COMPETITION QUOTED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 8, Aug 85 pp 28-30

[Quotes from V. I. Lenin: "V. I. Lenin on Socialist Competition"]

[Text] Socialism not only does not extinguish competition but, on the contrary, is the first system to create the possibility of using it truly broadly, in truly mass dimensions, drawing the real majority of workers into the arena of this work where they are able to manifest themselves, develop their capabilities, discover the talents which in nature are an untapped spring and which capitalism has trampled, suppressed and suffocated by the thousands and millions.

--"How To Organize Competition?" ("Poln. Sobr. Soch."  
[Complete Collected Works], Vol 35, p 195).

It is precisely at this time in Russia, with those foundations of political power which were created by the Soviet republic, with those economic qualities which characterize Russia and its boundless expanses and gigantic diversity of conditions--it is precisely now that our organization of competition on the socialist basis should be one of the most important and one of the most noble tasks in the reorganization of the society.

--Initial variant of the article "The Next Tasks of  
Soviet Power" ("Poln. Sobr. Soch.," Vol 36, p 151).

In the capitalist society statistics were a subject exclusively for "revenue people" or narrow specialists--we had to bring them to the masses, popularize them, so that the workers could gradually learn to understand them themselves and to see how and how much they should work, how and how much they should rest--so that the comparison of business results of individual communes became a subject of general interest and study, so that the outstanding communes were rewarded immediately (with a reduction of the work day for a certain period, increased earnings, a larger quantity of cultural or aesthetic benefits and values, and so forth).

--"The Next Tasks of Soviet Power" ("Poln. Sobr.  
Soch.," Vol 36, p 192).

All we have to do now is organize competition, that is, provide for publicity which will make it possible for all communes of the state to become familiar with precisely how the economic development has proceeded in various areas--to provide, in the second place, for comparability of the results of the movement toward socialism in one commune of the state or another--to provide, in the third place, for the possibility of practical repetition of an experiment that has been conducted in one commune by the other communes--to provide for the possibility of exchanging those material forces--and human forces--which have demonstrated their best aspects in a corresponding area of the national economy or state management.

--The initial variant of the article "The Next Tasks of Soviet Power" ("Poln. Sobr. Soch.," Vol 36, pp 152-153).

Not a single deep and powerful popular movement in history has been able to get by without paying a shameful price--without adventurers who suck upon inexperienced innovators and swindlers and braggarts and loudmouths, without absurd confusion, muddling, purposeless bustle....

--"The Next Tasks of Soviet Power" ("Poln. Sobr. Soch.," Vol 36, p 193).

Fewer elegant phrases, more of what is simple, everyday, work, concerns about a pood of bread and pood of coal! More concern about making sure that these poods of bread and poods of coal which are needed by the hungry worker and the ragged, unclothed peasant are delivered not by small transactions, not in a capitalist way, but through conscientious, voluntary, selfless heroic work of simple workers, such as the laborers and railroad workers of the Moscow-Kazan Railroad.

--"Great Initiatives" ("Poln. Sobr. Soch.," Vol 39, p 23).

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## COMPETITION DISCUSSED AT ROUND TABLE

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 8, Aug 85 pp 31-64

[EKO round table discussion: "Competition and Effectiveness of Production"]

[Text] Each stage of socialist competition has its own signs and tasks, but the main goal is the same--to take advantage of the enthusiasm and creative initiative of the workers for the progress of the country's economy. The forms and methods of competition in the modern stage, their correspondence to the tasks of accelerating scientific and technical progress and streamlining the management of the economy, the experience generated by the practice of competition and the results of scientific research regarding this problem were the subject of discussion at the round table held in Kiev by the editorial staff of the magazine EKO in conjunction with the Ukrainian Republic Trade Union Council, the Institute of Economics of the UkrSSR Academy of Sciences and the editorial staff of the magazine SOTSIALISTECHESKOYE SOREVNOVNIYE. The meeting was led by the editor in chief of EKO, Academician A. G. Aganbegyan.

Participating in the discussion were:

V. F. Andriyenko, candidate of economic sciences, sector chief of the Institute of Economics of the UkrSSR Academy of Sciences, Kiev;

V. A. Anokhin, secretary of the party committee of the Mine imeni XXII Syezda KPSS of the Stakhanovugol Association, Voroshilovgrad Oblast;

V. F. Borshchev, chairman of the territorial trade union committee of the Stakhanovugol Association, Voroshilovgrad Oblast;

V. V. Garbunov, chairman of the republic trade union committee of food industry workers of the UkrSSR, Kiev;

V. P. Grichanic, candidate of economic sciences, deputy director for production and economics of the Ivano-Frankov Leather Association;

L. N. Gurnak, director of the bakery and confectionery combine, Kiev;

M. I. Dolishnyy, doctor of economic sciences, professor, manager of the Lvov Division of the Institute of Economics of the UkrSSR Academy of Sciences;

V. A. Dubodelov, deputy chief of the administration for norm-setting, labor and wages of the UkrSSR Ministry of the Coal Industry, Donetsk;

A. L. Yeskov, chief of the division of labor and wages of the Novokramatorskiy Mashinostroitelnyy Zavod Association, Kramatorsk, Donetsk Oblast;

I. I. Lukinov, academician, director of the Institute of Economics of the UkrSSR Academy of Sciences, vice president of the UkrSSR Academy of Sciences, Kiev;

N. A. Orlova, candidate of economic sciences, sector chief of the Institute of Economics of Industry of the UkrSSR Academy of Sciences, Donetsk;

N. A. Panteleyev, chairman of the UkrSSR State Committee for Labor and Social Problems, Kiev;

V. A. Sologub, chairman of the Ukrainian Republic Trade Union Council, Kiev;

P. I. Suprun, candidate of economic sciences, prorector of the Institute of Management of the National Economy, Kiev;

L. A. Tarabanova, chairman of the Trade Union Committee of the UkrElektromash Association, Kharkov;

B. N. Tikhomirov, deputy general director for economics of the Azot Association, Rostov;

L. G. Fedchenko, candidate of economic sciences, deputy chief of the All-Union Soyuzuglemash Industrial Association of the USSR Ministry of the Coal Industry, Moscow.

#### Not Only on Enthusiasm!

A. G. Aganbegyan: We have met at the round table in the republic's capital where 50 years ago the Stakhanovite movement originated--one of the brightest and most significant phenomena in socialist construction. During these 5 decades the country's economy has moved far ahead. But the main principle of the Stakhanovite movement--a combination of worker initiative and skilled utilization of technical equipment and advanced organization of production--even today plays an important role in the organization of competition. We should like to hear how the traditions of the Stakhanovite movement are being retained. What are the new tendencies in the development of competition which reflect the modern tasks?

Our country is in a transitional stage of economic development. It is necessary to have a radical reorientation toward intensive methods of management. How is this taken into account in the organization of socialist competition? To what extent do its forms correspond to the measures for improving planning and the entire economic mechanism? How have the conditions of the large-scale economic experiment which is being conducted in industry influenced the indicators of the competition? How was the extensive introduction of collective forms of organization of labor and the movement for economic utilization of resources reflected in it? How are the methods of evaluating the results of the competition being improved?

The quintessence of the competition is dissemination of the advanced experience revealed in the course of it. What can be done and what is being in the republic so that good ideas and decisions are not enclosed within the framework of one production, but become the property of many enterprises? I ask you to give your opinions regarding these issues.

V. A. Sologub: The decree of the CPSU Central Committee, "On Improving the Organization and Practice of Summing Up the Results of Socialist Competition and Encouraging Its Winners," which was adopted at the end of 1983, motivated us to analyze the effectiveness and expediency of all of the forms of competition that are widespread in the republic, to weed out the second-rate ones, to eliminate parallelism and to concentrate attention on those areas which contribute most to the intensification of production. We have begun to devote more attention to the substantiation of socialist commitments. Now, as a rule, they are considered and defended in the labor collectives. The criteria for evaluation are also being improved. When summing up the results the most important indicators are now the fulfillment for the plan for deliveries under agreements, the level of utilization of production capacities and equipment, and the economizing on labor and material resources.

The organization of competition is frequently impeded by formalism and secrecy in summing up the results. When the evaluation of the results of the labor of many collectives or workers ends only by disclosing the winners, this can hardly do much for the rest of them. The laggards feel complacent: their unsatisfactory work has remained in the shadows. It is incomprehensible how those who have done fairly good work but for some reason have not been prizewinners look against this background. They would probably like to know their position in the table of ranks of the competition and see their strong points and their weak points, which cause them to fall behind the leaders. Having critically thought about these aspects, we began to sum up the results of the competition by determining all the positions held by participants, and not just those of the winners.

In Dnepropetrovsk Oblast, for example, in 1984 for the first time they try to determine all the positions held by the cities and rayons in the oblast competition, from the first to the last. The results were publicized--they were announced in the newspaper. This caused a nervous reaction from those who were behind: and it is not pleasant when a rayon turns out to be in 20th or 25th place.



An important result of competition is the dissemination of the advanced experience generated during the course of it. In the Ukraine one-fifth of the increase in labor productivity results from introducing this experience. They have created 37 branch programs for disseminating advanced labor methods. An interbranch regional system is in operation in Donetsk Oblast. But in other oblasts of the republic there are still too few of these systems. I think that it is precisely in this area that we should increase the work of the trade union and economic agencies. We are placing great hopes in the Scientific Council of the UkrSSR Academy of Sciences and the Ukrainian Trade Union Council regarding problems of socialist competition.

Unfortunately, questions of discovering and disseminating advanced practice still fall outside the field of vision of the scientists. They devote more attention to methods of evaluating the results and determining the winners. Frequently the recommendations of scientists not concrete, they end up being difficult to carry out, and sometimes they are contrived. Frequently methods are proposed which are based on numerous formulas--they simply cannot be applied in practice. The lack of demandingness on the part of the trade union organizations which approve these developments is also reflected. And yet, by concentrating on evaluations and results one can miss the essence of the competition--the initiative and creativity of the masses, and a live movement can become bureaucratized....

Fifty years have passed since that day when the young miner of the Tsentralnaya-Irmino Mine (now this is the Mine imeni XXII Syezda Partii), Aleksey Stakhanov, set a record result for the extraction of coal. The Stakhanovite movement is an entire epoch in socialist competition. Our task is to preserve and develop its traditions in keeping with the requirements of intensification of production and the scientific and technical revolution. What does this mean? Direct and reverse communication should become more essential, the mutual influence between socialist competition and the scientific and technical revolution. And to do this it is necessary to coordinate more closely the labor enthusiasm and the achievements of scientific and technical progress as well as modern methods of production management.

V. A. Anokhin: As we know, Aleksey Stakhanov set his record on the basis of the utilization of more progressive implements of labor and improved organization of it. During the 1930's the miners received the pneumatic drill to replace the pick. During the night from 30 to 31 August 1935 Stakhanov and two timberers extracted 102 tons of coal during a shift, covering the norm 14-fold and surpassing all world records of productivity when working with a pneumatic drill. His labor initiative was first taken up by the miners, and then followers appeared in all branches of the economy. Since that time, for example, it has become the norm to operate more than one machine tool in textile production, machine building and other branches. The zone for servicing equipment has even increased since the level of its mechanization and automation has risen. Engineers drive such heavy trains that it is impossible to see both the beginning and end of them in one glance.

The miners of the Donbass are now working under more difficult conditions than before. It is necessary to go deep underground, to work complicated beds



where it is difficult to bring in the coal extraction complexes. The miners of the Kuzbass and other new coal basins are in more favorable conditions and have the opportunity to mechanize production extensively. But it is also necessary to take measures for mechanization of the working of the less rich coal beds. We had the Kirovets combine. To be sure, it only cut the layer and the rest of the operations had to be done by hand. But, unfortunately, industry has not been producing spare parts for it for many years now. And now the combine itself has been removed from production. But we have not received any other technical equipment that is suitable for work under our conditions. We are somehow holding the old Kirovits together and using it in one section. But in other sections the coal is being extracted with pneumatic drills.

The coal industry has begun to operate less productively since recently it has not been as well supplied with technical equipment. While previously everything here was advanced, now we are falling behind. We have Hero of Socialist Labor N. P. Dolzhikov. About 5 years ago he found a pneumatic drill in an old mining area, cleaned it and then worked with it for 3 years. But now where are the drills? It is simply embarrassing to speak about it. The tool works for an hour or an hour and a half and then it fails. The quality of the drills is much worse even though they are lighter and more convenient and measures have been envisioned for reducing vibrations.

Enthusiasm alone will not go far. But the spirit of competition always lives in the people. Here is an example: as soon as the labor watch began in honor of the 50th anniversary of the Stakhanovite movement, record results appeared. The best miners are fulfilling the assignments at a level of 6-7 norms. And if this was to be reinforced with new technical equipment, it would be possible to achieve a considerable increase in labor productivity.

V. S. Borshchev: It is appropriate to raise questions related to the reconstruction of the Mine imeni XXII Syezda KPSS, and which Stakhanov worked. It lasted for 23 years, and it is time to put it to rest. It is also necessary to complete the construction of the administrative and domestic combine, the stadium and the aesthetic declaration of the entire production complex, which determines the appearance of the city of Stakhanov (formerly Kadiyevka): the city and mine should become a forging ground for educating personnel, above all in the glorious Stakhanovite traditions. I am speaking of this with the feeling of uneasiness since the interest in the history and traditions of the Stakhanovite movement, the Mine imeni XXII Syezda Partii and the native mine of the Stakhanovite movement is increasing on the part of all collectives of the branch and coal miners of Poland, Czechoslovakia, Bulgaria and the GDR. And this must be taken into account. Practically all enterprises of the city are under the jurisdiction of the UkrSSR Ministry of the Coal Industry, and to whom other than the ministry should one express concern about its present and future! Possibly the Ukrainian Trade Union Council should institute for the miners special bonuses imeni Stakhanov for the achievement of the highest production indicators. It is necessary to raise the prestige of the mining profession.

V. A. Anokhin: In my opinion, it is necessary to increase the role and responsibility of branch scientific and technical services the creation of

conditions for increasing labor productivity of the competitors. The gaps in their work are reflected in the indicators of the coal miners. Thus when developing the plan for the reconstruction of the mine, the planners made a mistake: in the horizon at 913 meters they placed on the same chain a section for mining coal and a section for removing rock. Now if something goes wrong in one unit all of the work is stopped. We informed the Yuzhgiproshakht Institute about this, but they did not listen to our opinion, and the new horizon was also planned on one chain.

We have not yet assimilated the funds according to the old plan for reconstruction before a new one was approved. We should like this time for it to be carried out more quickly and at a higher technical level because high productivity can be achieved only with a combination of new technical equipment and enthusiasm of the competitors.

L. G. Fedchenko: But still a good deal has been done in recent years. New mechanized complexes have been created, including for working thin layers. The proportion of mechanized extraction of coal is now 72.2 percent of the overall extraction from clean faces. But the pneumatic drill is still being used to extract a considerable quantity of coal in sections where other equipment cannot be applied--including at mines of the Stakhanovugol associations. Here there are thin, winding beds with geological flaws. The design of the pneumatic drill is constantly being improved. It is better than the drill produced previously by the Leningrad Pnevmatika Plant, which Aleksey Stakhanov used to extract 102 tons of coal per shift. But the new hammers do not fully meet the sanitary norms for noise and vibrations. The institutes are working on them. The problem has not been solved here, but it has been solved abroad either. Moreover, the quality of performance has been lowered because of violations of the technology at the Tomsk Electrical Machine Plant. There have even been cases of mass rejection. But the plant workers have assured us that no more rejected hammers will come to the Donbass.

#### Increasing the Responsibility of the Creators of Technical Equipment

A. G. Aganbegyan: But what is happening? The mechanized complex for working less rich beds of coal was created, approved and accepted by the state commission, but up to this point it is not being produced. The miners are having to use complexes that are intended for richer layers. Because the technical equipment does not correspond to the conditions of the Donbass, along with the coal so much rock is extracted that its extraction costs 650 million rubles a year.

L. G. Fedchenko: Yes, with mechanized removal of the coal, a good deal of rock is removed along with it in the Donbass. The new mechanized K-103 complex is intended for reducing the proportion of rock when extracting coal. The machine builders actually did delay its output, but by the beginning of 1985 they had already manufactured the first 45 complexes. At several mines where they are being applied, with the normatives of 700 tons, the average daily extraction of coal has reached 1,200-1,400 tons, including at the Abakumovskaya and Zarya Mines in the Donbass. But the majority of complexes have still not reached the planned indicators. We need joint work on the part of designers and operators. This is the first thing. The second thing is

that these and other complexes are frequently not used under the conditions for which they were intended.

A. G. Aganbegyan: But what can one do if there is no other technical equipment available?

L. G. Fedchenko: But the complex is created for particular conditions. Its purpose is registered in the technical passport and approved by indepartmental commissions. Why do the miners use it under conditions where it cannot provide high productivity?

Question from the floor: For 10 years the coefficient of the utilization of machine time of the complexes has been 0.25-0.33 percent in the country as a whole. How is this reflected in the results of the competition of their manufacturers?

L. G. Fedchenko: We are trying to develop the conditions of the competition in such a way that they contribute to improving the quality and effectiveness of the work of the plants of coal machine building. We are being helped in this by the Institute of Economics of Industry of the UkrSSR Academy of Sciences which is located in Donetsk. Special attention is being devoted to the effectiveness of the utilization of equipment at enterprises of Soyuzuglemash. A two-shift schedule minus time for planned repair has been adopted for all enterprises. All the rest of the time the equipment should be loaded--only then will the coefficient of its utilization be equal to 1.

All 29 of our enterprises are broken down into four groups of competitors, taking into account the technical and economic conditions for production. If the Kamensk-Shakhtinskiy Machine-Building Plant produces poor-quality sets of equipment, it occupies the last positions in the competition and receives no incentives. But we do not take into account the result of the operation of the technical equipment by the consumer. For a low coefficient of utilization of mechanized sets of equipment depends on more than just the manufacturers. Poor batching and low-quality metal also have an influence. At the mines there are many internal reasons why the sets of equipment stand idle.

P. I. Suprun: It seems wrong to me to transfer coal-mining machine-building plants to the miners. As a result, these plants ended up outside the influence of the art of machine building and were severed from its scientific and technical achievements. There was a time when in sharply dropping beds almost half of the coal was extracted with mechanized sets of equipment, but now only 7-8 percent is. The pneumatic drill has been put to use again, and moreover it is not even made as well as it used to be. It turns out that there is no technical provision for increasing labor productivity in coal extraction. Apparently in coal machine building the conditions for competition should be related to the final result--increased productivity of the labor of the miners.

In general problems of engineering support for high results of competition, as before, are debatable and crucial, although a certain amount of experience has been accumulated in enlisting specialists for more active participation in competition: work under creative plans, creative brigades and so forth. A



specialist must see his role in the development of the creative initiative of the workers. Let us recall again the record of Aleksey Stakhanov. Before the miner reached his high labor achievement, the engineers of the mines had thought out to the smallest detail the entire organization of his labor during that shift. The significance of the engineering resource in solving problems of the intensification of the economy is increasing especially under current conditions.

M. I. Dolishnyy: In our opinion, we should evaluate the results of the competition of engineering and technical personnel from the indicators that characterize their influence on the final results of the work of the collective.

In the Lvov Kineskop Production Association there are 31 functional divisions. Previously 130 indicators were used to evaluate their labor. Each service had its own indicators. This impeded the comparative evaluation of the activity of the divisions. Our institute suggested 14 indicators which were the same for all services. They reflect their contribution to the achievement of the cost accounting technical and economic results of the association, the degree of social and creative activity, and also the level of organization of the service's work. This provided for comparability and objectivity in the evaluation.

It is appropriate to recall, in my opinion, the effective form of integration of science and production which has arisen in Lvov. It originated in the process of competition and creative cooperation. We are thinking about the public interbranch scientific production complexes. Socialist competition develops within the framework of the complexes and commitments are applied here which are related to solving the most crucial problems of scientific and technical progress for the region as a whole, regardless of the departmental jurisdiction of the enterprises and scientific institutions.

There are also other possible forms of increasing the influence of science and technology on production which in combination with the enthusiasm of the competitors lead to higher rates of growth of labor productivity. We know of scientific research institutes and laboratories that are publicly based, training-scientific-production associations and so forth. Their experience should all be gathered together, studied and utilized, since during the period of the scientific and technical revolution and intensification the initiative of the workers should rest on a scientific and technical foundation. Only then is it possible to obtain a high return.

#### Competition and the Economic Experiment

A. G. Aganbegyan: Enterprises of various branches in the republic are participating in the large-scale economic experiment. The Ukrainian Ministry of the Food Industry was the first among the food workers of the country to begin to work under the new conditions of management. What new aspects have appeared in the organization of competition at these enterprises?

L. N. Gurnak: Of great significance was the fact that, having entered the experiment, we began to receive the control figures of the annual plan



considerably earlier. It became possible to discuss them in the collective of each shop and brigade and to make counterplans and socialist commitments. Previously we did not have this opportunity and therefore the commitments were accepted with caution and apprehension.

Under the conditions of the economic experiment the work of breadbaking enterprises is evaluated according to two indicators--profit and the output of high-quality products. We do not have any indicators for product sales taking into account deliveries under agreements since we work according to daily orders from trade. Of course it is easier for those who have a long-range plan. We are subjected to daily changes in supply and demand and we must be well aware of the market conditions. They take form under the influence of many factors. For example, during the holidays the majority of housewives bake at home and the demand for bakery items falls. During the summer months it increases toward the end of the week: people are going out of town. Each time it is necessary to restructure production flexibly. Because of the fact that the number of evaluation indicators has decreased to almost one-third, we have managed to concentrate attention on the quality and assortment. They have now become the main indicators for us.

A decisive condition for the success of any innovation is the human factor. The conditions of the experiment must be coordinated with the conditions of socialist competition, each worker must be informed of their meaning, and material and moral stimuli must be indicated. This is precisely why we attach such great significance to the system of economic education. The experiment envisions the development of initiative and increased responsibility at all levels of production. It is good when people come up with their own suggestions and have their own positions. But they must be prepared for this and be enriched with new economic ideas. I think that this includes the development of new economic thinking as well.

In classes at school for communist labor we have gone into the details of the conditions of the experiment and discussed the course of it. The students have generated many new suggestions. It was important not to fail to pay attention to them. The suggestions were considered in councils of shop brigade leaders and in conferences with the director. Then on the basis of these they generated organizational measures which were approved by an order from the director. Thus because of them it is possible to fulfill and overfulfill the plan, even with a certain reduction of the number of workers.

Publicity plays an important role. People can work well and then disperse to their various homes--and nobody knows about their labor achievements. We have trained the collective to know that after a record or a failure an "express telegram" will definitely be sent. The reaction to it is so emotional and immediate that sometimes it comes down to tears. Do not forget that our collective is mainly female!

According to the experiment the managers of the enterprises are given the right to establish additional payments for skilled workers, beginning with the fourth category. But at breadbaking enterprises most of the workers are in the third category. In order to motivate the workers of this category to achieve high indicators, we provide them with incentives according to the

results of the competition for the title "Best in the Profession," for personal mastery, and so forth. The results of their work and the lists of those who have received incentives are posted in the vestibule of the production premises.

It is much more complicated to determine which of the engineering and technical personnel and employees should be given personal increments. It was correctly mentioned in EKO that there are people who come to work on time and who are never absent, but there is no output from them because they do not work at full force.<sup>1</sup> How does one motivate activity? According to which criteria does one discover those who are creatively performing their duties? We decided to consider the question of personal increments for engineering and technical personnel in connection with the fulfillment of creative plans and the technical innovations which they suggest.

There is still a great deal to do in order to raise the technical level of the breadbaking industry. We have a large proportion of manual labor, especially in roll and confectionery production. The economic experiment has given us the opportunity to use the fund for the development of production for technical reequipment. But we cannot utilize it fully because there is no place to purchase the necessary machines. Apparently we should think about the conditions of the competition along with those who produce the machines for the food industry.

V. V. Gorbunov: The level of mechanization is low in almost all subbranches of the food industry, especially in loading and unloading work. In 1983 we limited the amount of weight which women must carry. It turns out that technically it is not so simple to enforce this limitation. There are no standard containers nor the corresponding mechanisms.

A. G. Aganbegyan: How is labor productivity increasing and how is the ratio being maintained between its increase and wages?

V. V. Gorbunov: During the first half of the year the increase in labor productivity was 5.6 percent (in 1983, before the experiment--3 percent). The increase in the production volumes was 5.4 percent, that is, this was achieved totally as a result of increased labor productivity with the reduction of the number of industrial production personnel by 1,600. The average wage is increased by 2.5 percent. The development of collective forms of labor organization helped considerably to achieve such results.

L. A. Tarabanova: The experiment also forced us to improve the organization of the labor of the brigades. We introduced competition of associated brigades and because of this in the first quarter of 1984 the UkrElektromash Association for the first time fulfilled the plan for deliveries by 100 percent. And this is one of the most important indicators in the economic experiment.

The participants in the combination of associated brigades are the labor collectives that are working in the same technological chain. The main point of their commitments is the fulfillment of assignments in terms of the final result. All links in the chain must provide conditions for the finish

operations and the output of the prepared product. The assignment is planned with the help of a computer and each brigade is informed of it. Such a system of operational planning makes it possible to enlist the lower levels in the management of production. The brigade itself decides how to organize the matter in order to provide for the finish processes.

We sum up the results of the competition each day. We determine the best brigade in the technological chain and reveal where there have been interruptions, which makes it possible to quickly take measures to eliminate breakdowns in production.

Because of brigade organization of labor it has become possible to reduce the number of employees. In each technological line we have released three people. In order to improve the technical support for collective forms of labor organization, we include some of the engineering and technical personnel in the brigades. Because of this measure the time periods for the assimilation of the new asynchronous electric engines of the AI series, whose production was envisioned under the target program for scientific and technical cooperation with the CEMA countries, have been reduced to one-third. In parallel with the creation of the blueprints the technology was developed and the more complicated and labor-intensive parts were put into production. The engineers included in the brigade helped to assimilate the new items and more quickly determine the stages in which hitches appeared. The beginning of the output of electric engines was planned for January 1985. But we managed to begin manufacturing them in the fourth quarter of 1984 and to produce the first batch of 120,000.

#### Strengthening the Link Between Commitments and the Final Result

A. G. Aganbegyan: In my opinion, what Lidiya Aleksandrovna Tarabanova said convinces us how effective competition can be if the socialist commitments are linked to the final results of production. But this interconnection is not always clear. What would you suggest in order to improve this?

B. N. Tikhomirov: The Rovno Azot Association has taken the path of creating collective zones of management which operate for the final result. A zone is formed on the basis of unified cost accounting conditions, unified planning evaluation and fund-forming indicators and a unified incentive fund for all brigades that are included in it. A zone includes four-five associated brigades in basic production, which comprise a whole chain which serves the technological process for producing a particular product. Or it can include four to five associated brigades which repair equipment from one technological line. Within the zone competition is organized among associated subdivisions.

A collective zone can consist of management services of the technological shops that form a unified complex: raw material, production of a semimanufactured product, the final product, processing of production wastes, and also engineering and technical personnel of the shop for repair and interrepair service of the equipment of these shops. The cost-accounting collective zones of management personnel make it possible not only to utilize internal reserves of one shop, but also to improve the production-economic and

social ties among shops and to avoid many problems and obstacles which previously arose as their juncture.

The association has worked out a mechanism of collective responsibility and interest in the results of the labor. The zone has an overall personal account of the cost-accounting results while each brigade included in it has its own personal account. It includes the following indicators:

the fulfillment of the plan for the production of products with the given level of utilization of capacities;

the fulfillment of the assignment for improving product quality;

the correspondence of the level of the technological process to the normative level;

the observance of norms for the expenditure of raw and processed material resources;

the correspondence of the comprehensive indicator (coefficient) for the protection of labor, technical safety and the art of production to the normative level.

From the monthly results of the work, the funds for bonuses for fulfillment of the basic indicators of the work and for economizing on material resources, and also additional payments for the fulfillment of the production assignment with fewer workers are deposited in the general account of the zone.

How is the incentive fund distributed? The brigade which has taken first place in the competition is given an additional 15 percent, and the one that has taken second place--10 percent. If the collective zone does not have any brigades that lag behind, the overall material incentive fund is increased by 20-30 percent. The council of brigades redistributes these additional funds taking into account the coefficient of collective labor participation which has been introduced in the association. Attention is also paid to the assistance the brigades give to their associates.

Collective forms of labor organization encompass about 71 percent of the workers--312 brigades of workers and 65 primary labor collectives of engineering and technical personnel and employees. This has had a favorable effect on the results of the operation of the association during the first 3 years of the 11th Five-Year Plan. Labor turnover has decreased and the moral and psychological climate has improved. The output of products has increased by 36.2 percent, with an increase in labor productivity of 40.2 percent and in average earnings--of 11.2 percent.

V. P. Grichanik: In the Ivano-Frankov Leather Production Association we established the link between socialist commitments and the final results of production with the help of all-encompassing indicators. But then there arises the problem of balance between planning indicators and raw material resources. Agriculture cannot satisfy the demand of the leather plants for



raw material. I cannot imagine how under these conditions we could bear responsibility for the final results if we participated in the experiment.

V. V. Gorbunov: Yes, this is a serious problem. The food industry workers have had their fill of it since they are also strongly dependent on agricultural raw material. But under the conditions of the experiment it is stipulated that in these cases the utilization and formation of the incentive funds should be regulated. Of course, one can come up with the radical solution to the problem only when the raw material branches are working under the same conditions as the consumers. But the competition of associated workers and mutual commitments should help now.

I. I. Lukinov: All the speakers are discussing the organization of socialist competition from the standpoint of collective forms of labor organization. These undoubtedly need to be improved and the results should be increased, but one should attentively make sure that man and his personal initiative are not lost. We also extensively use coefficients of labor participation and other forms of determining the individual labor contribution, but nonetheless--I wish to emphasize once again--one cannot allow the personality of the worker and his labor activity to be dissolved in the collective and collective labor, so that his creative potential is lost. In the final analysis everything is done by people, and activating the human factor in the direction necessary for society is one of the major target functions of socialist competition.

L. A. Tarabanova: We should pay attention to the fact that skilled workers are the hardest of all to enlist into the brigades. They are afraid that their mastery, experience and skills will not be noticed and esteemed. We have thought a good deal about how to combine collective forms of labor organization with the disclosure of all the individual capabilities of each worker, and we have decided to retain individual competition for determining the best in the profession. The workers who won the first places in the competition of winders, smelters and so forth, are encouraged both morally and materially. In the brigade, when determining the labor contribution of each worker, in addition to the coefficient of labor participation we use additional payment for professional mastery.

#### A Comprehensive Indicator of Resource-Intensiveness Is Needed

P. I. Suprun: I should like to take note of another aspect. Since a whole number of problems related to material resources have not yet been solved we must attract the attention of the competitors of the need to economize on raw and processed materials. And here it is necessary to take nontraditional paths, to develop special forms of competition for economizing on resources, and to search out criteria for evaluating the results of the competition from the standpoint of the resource approach. It would be expedient to reduce a comprehensive indicator of resource-intensiveness for all the various kinds of resources, including labor resources, and the winners should be determined taking this into account.

Question from the floor: Does it not seem to you that this would only complicate the summing up of the results of the competition?

P. I. Suprun: No, it does not seem so. I think that expanding the independence and increasing the responsibility for the final result are forcing many enterprises to turn to this indicator. For according to the experiment efficient utilization of resources is a source of increasing the incentive fund. If you improve the utilization of labor resources you save on the wage fund and have the opportunity to pay additional payments to those who work well, and if you reduce the material-intensiveness you reduce the production cost and you receive additional profit and additional payments into the economic incentive funds.

A. L. Yeskov: At the Novokramatorsk Machine-Building Plant a special form of competition for economizing on labor resources--the movement of the "Thousands"--helped to create good starting conditions when preparing for the experiment. It was approved by the board of the Ministry of Heavy Industry, the State Committee for Labor and Social Problems and the AUCCTU.

What is the essence of the movement? Each engineer must produce creative solutions which during a year would make it possible to reduce labor-intensiveness by no less than 1,000 norm-hours. In 1983 because of this we managed to reduce labor-intensiveness by 983 norm-hours as compared to what was planned. The increase in labor productivity throughout the association during the year amounted to 5.1 percent, including 4.7 percent as a result of reducing labor-intensiveness. Every second engineer became a "Thousand" member, and many submitted suggestions that made it possible to save 3,000-4,000 norm-hours.

In 1984 the labor-intensiveness was reduced by more than a million norm-hours. Two-thirds of the engineering and technical personnel were already participating in the "thousand" movement. During this year labor productivity increased throughout the association by 6.6 percent, including by 5.5 percent as a result of reducing labor-intensiveness.

How was the summing up of the results of the competition and the incentive for its participants organized? A specialist who provided for reduction of labor-intensiveness by 1,000 norm-hours and more was given the title "Thousand-Engineer" and awarded a certificate and a monetary remuneration. And at the end of the year each of them is given additional incentives. For a thousand norm-hours they express their gratitude, for 2,000--the engineer is awarded a certificate of honor--for 3,000--the remuneration for the results of his work during the year is increased by 50 percent, and for saving more than 4,000 norm-hours a personal increment is set to the salary in an increased amount. Three tourist passes are also issued. The more outstanding specialists of the Ministry of Heavy Machine Building are given the certificates "Best Thousand Engineer" of the ministry and also a monetary bonus.

We count in the savings only those results which were obtained from the introduction during the course of the year. Unrealized innovations are not taken into account. There have been disputes regarding this and we are grateful to the chairman of the State Committee for Labor and Social Problems, Yuriy Petrovich Batalin, who supported our position. The effect that is needed is not calculated, but real.

What has this approach produced? Every technical engineering worker now zealously checks on the introduction of his development. He knows when his innovation will go through production, he is interested in whether or not problems have arisen, and he helps to solve them. We award the certificate "Best Thousand Engineer" and "Best Thousand Collective." The ministry also issued bonuses to the most outstanding winners of the Competition of the Thousand according to the results of 1983.

I. I. Lukinov: It seems to me too that utilizing the criterion of the effectiveness of the resource potential when evaluating the results of the competition has important prospects. Even now we consider the effect both in terms of absolute and in terms of relative indicators. In the latter case for the numerator we use: the gross and net income (profit), and for the denominator--production outlays and circulating capital. We obtain the indicator of profitability and the degree to which expenditures and total funds are recouped. But these indicators, unfortunately, are frequently contradictory. Therefore it is necessary to search for ways and means of reducing the resources functioning in economic circulation to a unified indicator and using it for evaluating the economic activity and the results of competition.

Now about the shortage of resources as a whole and labor resources in particular. Personally I am not inclined to dramatize the situation. Of course it is bad that we are short of certain resources. If there were a surplus, as they say, we could increase output without turning around. But when there is a shortage of one resource or another we begin to search for a way out of the situation and turn to real acceleration of scientific and technical progress and not to simply formal acceleration as is frequently the case, unfortunately.

Frequently we greatly exaggerate the difficulty of the situation with labor resources. Conversely, at the enterprises they sometimes especially approve surpluses of labor force, partially in order to send them to various jobs for which they are not intended--to the kolkhozes, for construction, and so forth. Therefore the question of labor resources should be considered in organic interaction with their real release and with scientific and technical progress. Take the enterprises of the food industry in the Ukraine: all that was necessary under the conditions of the experiment was to determine personal increments for engineering and technical personnel and additional payments for skilled workers from the savings on the wage fund in order for them to manage to release 1,600 people. Or there was the same experiment in reducing labor-intensiveness as a result of the competition of the thousands among the Kramatorsk workers. Improvement of management in the economic mechanism, the introduction of the results of scientific and technical progress and the development of competition will help us to competition for the shortage of resources.

**There Should Be No Place for Formalism in the Competition!**

A. G. Aganbegyan: During the time when we were preparing for this meeting at the "round table," the EKO editorial staff analyzed the results of a questionnaire of readers during 1984. It was revealed that neither the



special selection of articles on the competition nor the article on the competition of technological chains at the Moscow ATE-1 Plant, nor other materials on this subject received such high ratings as the articles on management and improvement of the economic mechanism.

What is the reason for this? After all the principle of competition plays a large role in our life. We avidly follow the competitions of sportsmen, the competitions of musicians, peasants and reciters, we are attracted by the television programs "Well Girls!" and "Well Boys!" Finally, we ourselves are constantly participating in labor competition, even when it is not officially declared. We attentively check on the occupational mastery of our colleagues and try to gain something from them. We are far from indifferent about how our work looks in comparison to the results of others.

I will say that the editorial staff was unable to interest the readers because of the traditional forums in which the materials about the competition were presented. But there are probably other reasons as well. I should like to hear your viewpoint.

L. A. Tarabanova: It seems to me that cases of a formal approach to the organization of competition exert a certain influence here. But still we have very many initiatives. The worker certainly does not need to know all of them. For him the main thing is his own final result, obtained with maximum effectiveness. But still the commissions sometimes come to the shop and ask whether the worker knows about one undertaking or another. Certain of them do not even know what to answer. After all, many initiatives simply are not appropriate for the conditions of a given enterprise. Is it really necessary to apply them just for the report, for the sake of appearances? This is where formalism in competition comes from.

V. P. Grichanik: The problem is that almost every initiative is supposed to be extended to all industrial enterprises. We calculated that under the 10th Five-Year Plan there were 1,000 initiatives--200 a year. It is impossible to utilize all of them, but we absolutely must apply them and report on them.

L. N. Gurnak: All branches participating in the experiment have already changed over to the new indicators of the competition, but we still have to report to the local management agencies on the old forms and the old indicators. We should like for the conditions of the competition in the cities and rayons to be brought into line with the work being conducted in the national economy for improving the economic mechanism.

A. G. Aganbegyan: Unfortunately, there is still a good deal of formalism in the organization of the competition. In particular, the procedures for adopting commitments have become bureaucratized at certain enterprises. The worker is supposed to sign a blank form with a previously prepared text. And what if the person has much more serious intentions? Perhaps he does not like certain of the points? Give him the opportunity to think about it, to manifest himself, to express his "I" and do not suggest that he scribble his signature on standard blank forms of commitment! Then he will have a sense of responsibility for his word and the resolve to keep it, regardless of what this may cost.



The serious shortcomings in the criteria and the evaluation of its results reflected in the authority of the competition. The radical reorientation toward the intensive of production which has been carried out in the country has not yet been reflected very much in the organization of socialist competition. It is necessary to have a radical restructuring of the conditions for the competition and the methods of evaluating its results. What could you suggest to accomplish this?

How To Evaluate, What To Evaluate?

N. A. Orlova: The Institute of Economics of Industry of the UkrSSR Academy of Sciences (Donetsk), in addition to other problems, engages in the improvement of the organization of competition. We think that it is necessary to conduct in-depth scientific research on the evaluation of the results of the competition and its conditions. We have come to this conclusion after analyzing the conditions of the competition in 40 ministries and departments.

Having studied the branch provisions we became convinced of the diversity of conditions for the competition and the various approaches to their development, which do not always ensue from the specific features of the branches. A typical sign of the majority of these provisions is the fact that they have numerous indicators, and they are constantly expanding. Thus when summing up the results of interplant competition in the Ministry of the Machine Tool and Tool-Building Industry they use 68 indicators, of which 48 are basic and 20 are calculated; in the Ministry of Machine Building for Light and the Food Industry--39; and the Ministry of Machine Building for Animal Husbandry and Feed Production--40. The results of the activity of the enterprises in the area of technical progress are evaluated according to 17 indicators, of which only one is the same for all branches--the fulfillment of the plan for the assimilation and introduction of new technical equipment! The situation is similar with respect to other aspects of the work of the enterprises.

The activity of industrial enterprises is directed toward the output of products necessary to the workers and production. They should be manufactured with minimal expenditures of labor, material and financial resources. This predetermines the need to develop and introduce a generalizing, comprehensive evaluation of the relative level of effectiveness of the activity of the competing labor collectives. The economic part of the comprehensive evaluation of the results of the competition, from our viewpoint, should consist of two components which complement one another: the evaluation of the satisfaction of public demands and the evaluation of the effectiveness of the utilization of live and embodied labor.

One of the basic indicators that form the first component is the fulfillment of the plan for deliveries under agreements and orders. The evaluation of the quality of the product also becomes very significant. The second component, it seems, should consist of the following three elements: the indicator of the productivity of live labor, which characterizes in various ways the degree of utilization of labor resources; the indicator of the output-capital ratio, which reflects the degree of utilization of fixed capital; and the indicator

of the material-intensiveness, which demonstrates the utilization of material resources.

We suggest evaluating the activity of the competitors on the basis of these indicators through comparing them with the highest results of the leading collectives. Our institute has developed the corresponding methodological recommendations and instructions, which many enterprises are already applying. This approach makes it possible to link the results of the competition to the dissemination of advanced experience.

We attach a great deal of significance to the social aspects of competition. It is possible to take this into account by applying additionally indicators which characterize the labor activity of the workers, the condition of labor discipline and the art of production. But the group of social indicators, like the economic ones, should be limited. Then the significance of each of them increases, as do the comparability and reliability of the results.

V. A. Dubodelov: The UkrSSR Ministry of the Coal Industry uses the method of comparative evaluation with a standard. In our opinion, the method proposed by the institute is effective and feasible. We have established five evaluative economic indicators for the mines (extraction of coal, preliminary preparation of the mining face, labor productivity, material-output and capital-output ratio) and the three social indicators named by N. A. Orlova. The standard mine in the associations is determined on the basis of these indicators. Computer equipment helps us in this. In coal production associations there are computer centers and programs have been developed. On the 8th of each month the computer center provides a printout of the results for all of the mines. This clear ranking makes it possible to judge objectively the prize-winning places in the competitions. The managers of the mines see for themselves how their mine falls behind the other enterprises. Now we are trying to apply a similar method in the competition among brigades of mines and, of course, to also evaluate all places from the first to the last.

But we are not managing to solve problems of providing incentive for the participants in the competition. The material incentive fund is formed in the association and not in the mines. And if the results of the work are unsuccessful there is no source of bonuses. At the same time, along with backward mines there are also mines that are operating well here. If they were independent they would have their own incentive funds.

L. A. Tarabanova: Material incentives for the winners is a complicated problem for us as well. To be sure, we have increased the amounts of the funds for incentives and brought them up to 10 percent of the material incentive fund (more is not permitted). Today everything can be reduced to monetary bonuses, and it would be good somehow to separate out the bonuses for the competition, if only to give valuable gifts. But the bank does not permit this.

V. S. Borshchev: Ninety percent of the mines in our association have been changed over to issuing wages through savings banks. And the worker is not even aware of these 5-10 rubles which are included for participating in the

competition. Valuable gifts would be more effective. It is also necessary to strengthen moral incentives.

V. F. Andriyenko: It is necessary to clarify the relationship between the mechanism for providing incentive for the competitors and the system of distribution according to labor as a whole. The fact is that more and more frequently demands are made to make the distribution of material goods (wages, bonuses, distribution of the material incentive fund and so forth) subordinate to the goals of the competition as much as possible. This is tantamount to demanding that the amount of the worker's remuneration be determined not according to the quantity and quality of the products he produces, but according to the results of the competition (the place held, the goal reached).

Why can we not allow the replacement of certain criteria and indicators with others? Because the conditions of the competition are local in nature. In various places the efforts exerted in order to achieve the established goals in order to win prize-winning positions can differ significantly in terms of difficulty. But the system of distribution according to labor should be unified and profoundly scientific.

The country has created a ramified apparatus for realizing the principle of distribution according to labor. This includes the tariff network, the category network, the system of wages, the formation and distribution of incentive funds, and so forth.

It is necessary to have a clear idea of the role of competition both in the production and in the social process. It cannot be either diminished or exaggerated. The organization of competition is only one of the elements in the organization of public labor. The goal of competition is to give a new impulse to labor, embellishing it with the joy of competition, a healthy excitement, and creating stimuli which appeal to the high spiritual qualities of man. On the basis of this the incentive for competition are only one of the elements of the overall system of incentives for labor activity. The bonuses for the winners of the competition are necessary, but they should not be an element of wages, but a reward. In any event only part of the effect achieved as a result of the competition should be extended to material incentives. Reliance should be placed on moral incentives. The awarding of even modest bonuses should take place festively, so that it is perceived as a landmark in the individual's labor life.

M. I. Dolishnyy: It seems to me that the incentives for the winners of the socialist competition should be a part of the overall system of incentives. Today at enterprises there are dozens of provisions concerning bonuses in effect at the same time. They are not only not intercoordinated and do duplicate one another, but frequently they are contradictory. As a result the increase in wages is not adequate to the labor productivity. It is necessary to have an entire mechanism of incentives.

N. A. Panteleyev: There are concrete answers to these questions in party and government decisions. The importance of observing this provision is also reflected in the material from the 26th CPSU Congress, which contains a clear-

cut instruction--"to strengthen the link between material and moral incentives and the results of socialist competition for increasing the effectiveness of production and improving the quality of work."<sup>2</sup>

The corresponding legal mechanism has also been developed for meeting these requirements. The basic provisions concerning awarding bonuses to workers of enterprises, which were approved by the USSR State Committee for Labor and Social Problems and the AUCCTU in 1980 stipulated that the amount of bonuses can be increased or decreased for each specific collective or worker depending on their achievements in the competition.

It is another matter that the force of inertia is great and these principles are still being poorly realized in practice. While the bonus provisions for enterprises do envision a change in the amounts of bonuses depending on the achievements in the competition, as a rule, it is a matter of reducing them under the policy of sanctions for various kinds of deviations in production.

We are deeply convinced that the prestige of winning in the competition would increase significantly if the workers and collectives of brigades, sections, shifts, shops and enterprises that have held prize-winning positions in the competition according to the results of the work for the month or quarter were calculated in amounts in excess of the average level.

In the overall sum of payment for labor the proportion of bonuses according to the results of the competition paid from all sources comprises less than 0.5 percent. It is quite obvious that this is clearly inadequate. But improvement of methods of incentives is in no way exhausted by measures for increasing the effectiveness of the competition. In order for it to fulfill the role of a powerful lever in solving those socioeconomic problems that face the country, it is necessary to render methodological assistance to the organizers of the competition. During the 1980's in the republic there will be a certain absolute reduction in the number of population of working age. Therefore for us the search for ways of increasing the effectiveness of public production is the question of questions. The Republic State Committee for Labor and Social Problems in conjunction with the Ukrainian Trade Union Council has developed and sent to the enterprises and associations a number of normative and methodological documents concerning the organization of socialist competition. Functioning in the republic is an interbranch school for workers of the ministries and departments which are responsible for the organization of competition in their branches. In the oblast centers and in Kiev such schools are in operation or are being created for organizers of the competition in production collectives. Plans have been approved for introducing advanced experience in the branches.

The republic comprehensive target socioeconomic and scientific-technical program, "Labor," for the 11th Five-Year Plan is being successfully carried out. A similar program is now being developed for the 12th Five-Year Plan. Its goal is to provide not only for the fulfillment of the assignments of the five-year plan for increasing labor productivity in the republic's economy, but also to provide for increasing it annually in excess of the plan.



last year's experience has convinced us that if we take solving this problem seriously the effect can be quite appreciable. The concentration of the efforts of the participants in the competition on increasing labor productivity made it possible in the republic's industry as a whole, in all 25 oblasts and Kiev, to provide for the fulfillment of commitments for above-plan growth by no less than 1 percent.

Of course the effect from the competition is lost when the established production plans come late or they are adjusted in the direction of reduction. A decision has now been made not to award prize-winning positions to collectives whose plans have been adjusted in this way.

A. G. Aganbegyan: What should we like to say in conclusion? The significance of socialist competition is the most important method of increasing the labor and social activity of the masses is generally known. Its objective basis is comprised of socialist production relations and socialist cooperation in labor which corresponds to these. Because of the increased scale of the national economy, the greater role of intensive factors in the development of the economy, and the high rates of scientific and technical progress, it is necessary to develop forms and methods of competition which will correspond more completely and comprehensively to today's tasks--tasks of improving developed socialism--and rely on the rich traditions of competition and the Stakhanovite movement.

The overall approach is clear--the goal direction toward the achievement of the best final national economic results with reduced expenditures and the orientation toward the public good which is manifested in the utilization of the created product. I wish to emphasize that it is precisely an orientation toward the achievement of the final, and not the intermediate results! During the process of our meeting at the round table we have repeatedly mentioned plants of the coal industry. We passed around a note on which the question was asked: "If science had not created new technical equipment for extracting coal under the existing conditions, why should the machine builders be responsible for this? Other enterprises of the country, which produce technical equipment for agriculture and other branches, are in similar conditions. But how do we increase the effectiveness of production at these plants?"

But the mechanized complexes for working the smaller beds were developed 5 years ago, they underwent testing, and they were sent to the machine-building plants! Specific deadlines were established when this technical equipment was to appear, but so far it is not in evidence. When the complexes are used labor productivity increases by 40 percent. But the main thing is that they make it possible to extract coal without rock. And the currently existing equipment produces about 25 million tons of empty rock a year from these beds. Where should forces be applied in the competition of the workers of coal industry machine building? Of course, in the assimilation of the production of these complexes of equipment!

Or take meat combines. The value of the meat which remains on the bone, translated into retail prices, is more than the wage fund in the branch. It is necessary to look at the final product, and the manufacturers will increase

their effectiveness, but the consumers will receive nothing. Or, for instance, the plan is fulfilled in units for consumer goods, which then remain on the shelves of the stores and are marked down. From the standpoint of the national economy this is a direct loss.

Competition for increasing labor productivity is very significant. The Ukraine is rich in good undertakings. I am referring to the Zaporozhye initiative "Heavy Labor--On the Shoulders of Machines," the experience of the Dnepropetrovsk Combine Plant for improving the utilization of labor resources on the basis of certification of work positions, the movement of the thousands at the Novokramatorsk Machine-Building Plant, and the initiative of the workers of Donetsk Oblast, who, in conjunction with Moscow workers, suggested developing competitions for increasing labor productivity by 1 percent in excess of the plan. All this is extremely important since we must cover the reduction of the entries in the number of employees by an additional increase in labor productivity. A considerable increase in the rates of growth of labor productivity is provided by changing over to the brigade contract with payment according to the final result. But we are concerned about the fact that the brigade organization of labor is frequently developed not in depth, but in breadth. The number of brigades is increasing rapidly, but labor productivity is increasing slowly. One of the shortcomings of brigade organization of labor is the poor engineering support for collective labor processes. There is now a movement to include engineering and technical personnel in the brigades, and in a number of places this is providing an essential improvement. At 15 enterprises of Novosibirsk they are conducting an economic experiment, according to whose conditions collective forms of labor organization encompass the shops and sections. A collective which is working for the final results includes foremen, technologists and other engineering and technical personnel. In the Ministry of Construction for Petroleum and Gas Industry Enterprises many comprehensive technological groups --essentially entire construction and installation administrations--have been changed over to the collective contract.

The speakers correctly noted that human individuality should not be lost in the brigade. In socialist competition there should be an effect from factors which are found in man--his initiative, talent and energy.

Competition for economical utilization of raw material resources is now crucial. The growth rates of their extraction are decreasing and the bases are shifting to Siberia where it is necessary to work under the conditions of the taiga, the tundra and marshes. It is necessary to lay new petroleum and gas lines and main transportation lines, and to construct the cities. The watch method is also expensive. Each ton of extracted raw material is becoming more expensive. Therefore competition for economizing on it is one more reference point for increasing national economic effectiveness. Apparently conditions should also be revived both for the all-union and branch competition. It is necessary to take into account as well the fact that the large-scale experiment embraces a larger and larger number of enterprises and branches.

We must manage with relatively less utilization of capital investments. But what do we sometimes see? In Azovstal they constructed a converter shop with

the productivity of 5 million tons of steel a year, but the installation for continuous smelting of steel was installed for 3.5 million tons. As a result, the converter frequently stands idle. Because of the lack of coordination of the technological chain the shop operates on the verge of losses. Or take the Kremenchug Automotive Plant. It is extremely important to accelerate the assimilation of the new model of truck which will enable the country to stop importing the Magirus. They haul only 15 percent more than the new truck that is being created, but they cost incomparably more. It is equally necessary to accelerate the assimilation and improve the utilization of costly machine tools with numerical program control, flexible automated systems and other of the latest technical means--everything which is so generously and rapidly being offered to industry by scientific and technical progress. Therefore competition for the acceleration of the assimilation of new technical means and for better utilization of capacities and equipment seems to me to be one of the most important special-purpose forms of competition in our time.

Socialist competition influences more than just the development of the economy. It educates man. And the more it does so, the more his social role will increase. Sometimes it is possible to find a manifestation of consumer tendencies in our lives: giving less and taking more. But in labor man is manifested and established as the most active social force. Therefore it is necessary to pay special attention to the role of competition in increasing labor and social activity.

#### FOOTNOTES

1. Dzhurabayev, K. G., "A Comprehensive Approach Is Needed," EKO, No 5, 1984.
2. Materials of the 26th CPSU Congress, Moscow, Politizdat, 1981, p 199.

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## HISTORY OF STAKHANOVITE MOVEMENT SKETCHED

Novosibirsk **EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)** in Russian No 8, Aug 85 pp 64-78

[Article by L. S. Rogachevskaya, doctor of historical sciences, Institute of USSR History of the USSR Academy of Sciences (Moscow): "The Path of a Great Initiative"]

[Text] "The Stakhanovite movement means organizing labor in a new way, streamlining technological processes, providing for correct division of labor in production, releasing skilled workers from secondary preparatory works, organizing the work place better, and providing for rapid growth of labor productivity and wages of workers and employees.

"The Stakhanovite movement raises the cultural and technical level of the working class, breaks old technical norms...."<sup>1</sup>--this is the way the new mass movement was described at the December (1935) Plenum of the Central Committee of the VKP(b) [All-Russian Communist Party (of Bolsheviks)].

It was prepared for by all of the preceding development of the socialist state. By the end of the second five-year plan a powerful socialist heavy industry was created which was supplied with the latest word in technical equipment and had become the basis for the reconstruction of the national economy as a whole. By the middle of the 1930's gigantic plants had appeared. Uralmash, the Gorkiy Automotive Plant, the Stalingrad, Kharkov and Chelyabinsk tractor plants, the Magnitogorsk and Kuznetsk metallurgical plants, the Bereznikovskiy Chemical Plant, the Tashkent Cotton Fabric Plant and others. Frequently it took more time to achieve the planned capacities of these enterprises which were equipped with the latest machines and aggregates than it took to construct them. New technical equipment came also to many existing plants and mines. It requires skilled workers. "Personnel who have mastered technical equipment decide everything during a period of reconstruction!"--the main slogan of those years.

But what would the personnel like?

In 1935 in the national economy there were 25.2 million workers and employees, including 36 percent--in industry, 13--in transportation and communications, 12--in agriculture, and 9 percent--in construction. In industry 78 percent of



all those employed were workers, 7--engineering and technical personnel, 6--employees and 9 percent--students and junior service personnel. The proportion of heavy industry workers reached 66 percent in 1936 as compared to 54 percent in 1928, and in machine building and metal processing these figures were 30 and 18 percent, respectively. The production of complicated equipment required that machine builders have a certain cultural and technical level. Additionally, only well-trained miners, metallurgists, textile workers, footwear workers and so forth could use such technical equipment. On 15 September 1933 the TsIK and the SNK of the USSR adopted a decision concerning transforming the factory and plant schools into trade schools which would train workers in mass specialties. The training period in them was reduced from 3-4 years to 4-12 months (relying on production training). During the 2nd Five-Year Plan they graduated 1.4 million people (3 times as many as during the 1st Five-Year Plan). But a major role was played by training directly in production, which could embrace all of the workers. In 1933 they developed a mandatory technical minimum for workers handling complicated machines. "Know Your Machine Tool"--with this slogan the Uralmash workers called for taking the public technical examination ahead of schedule. They were supported at many plants. In 1935 1.6 million workers in industry were working under the technical minimum, and throughout the entire course network--2.5 million.

Not only the sharp rise in the cultural and technical level of the working class during the first half of the 1930's, but also the improvement of their material domestic situation affected the generation and development of the Stakhanovite movement. In 1935 the rationing system was completely eliminated. Nutrition improved appreciably. In working families there was increased consumption of meat, fats, milk and sugar. During 1935 alone the workers' consumption of bacon and eggs doubled, and the consumption of rye bread decreased by 12 percent.<sup>2</sup> At the same time there were greater expenditures on clothing, linen, footwear and furniture.

During the first half of the 1930's the party and the government, in spite of considerable financial difficulties which were brought about by the accelerated rates of industrialization, considerably increased expenditures on social-domestic and cultural services for the working class. In the plants and factories they opened up specialized outpatient clinics, polyclinics and health points, and there were day nurseries and kindergartens in operation at the enterprises. During 1933-1934 more attention was paid to housing construction for the workers and building up the cities and settlements. In the new construction projects of those years a considerable position was occupied by buildings with many conveniences: running water, sewage, gas, central heating and sometimes even telephones. During those years in housing-municipal and social-cultural construction they invested 2.2 times as much money as in 1929-1930.<sup>3</sup>

The elimination of unemployment, the 7-hour work day, complete abolition of the rationing system, increased wages, improvement of nutrition, medical service, living conditions and other facts which reflect the concern of the party and the government for improving the well-being of the working class brought about a response from the population--the desire to work with greater

exertion of effort. This patriotic desire was actually reinforced by the condition of productive forces.

At the enterprises they continued to reinforce the forms of socialist competition which already existed by the middle of the 1930's and had justified themselves--counterplanning, cost accounting and shock brigades, competition among the occupations, the Izotov movement and so forth--and a powerful new nationwide movement was also originated, which was given the name Stakhanovite.

#### The Labor Feat of A. G. Stakhanov

At the beginning of the 1930's the rock coal industry received new technical equipment--pneumatic drills. Their average productivity was 6-7 tons of coal per shift. The norm was clearly too low since the miner utilized the equipment inadequately, spending a good deal of time on reinforcing the supports as he made his way within the coal bed.

At the Donetsk Mine Tsentralnaya-Irmino for a long time they discussed how to organize the work in a new way. And they found a correct solution: they divided up the operation of building the supports and mining the coal. During the night from 30 to 31 August 1935 A. G. Stakhanov, working with two experienced support builders, mined 102 tons of coal during a shift. At the same time in the mines of the Ruhr, which held one of the leading positions in world coal extraction, the average productivity with a pneumatic drill was 14 tons, and the highest--16-17 tons. Even if 102 tons were divided by three miners, it turns out to be 34 tons each, which significantly surpassed both the world record and the output at Soviet mines. Stakhanov indeed showed what new technical equipment can do with correct organization of labor.

A. G. Stakhanov was born in 1905 in the village of Lugovaya in Orel Province. He went to work at the Tsentralnaya-Irmino mine dreaming, as he himself said, of saving up money for a horse and then returning to the village. But the changeover to the working class and subsequent joining with the miners as well as the work with the new technical equipment gradually changed his psychology.

Soon after A. G. Stakhanov set his record he was accepted into the party and awarded the Order of Lenin. In 1936 he was sent to the Industrial Academy, and in 1937 he was elected a deputy of the USSR Supreme Soviet. During the war years he worked as a section chief in a mine in the Karaganda Coal Basin, and then in the Ministry of the Coal Industry. After the middle of the 1950's he worked again in the Donbass as an assistant head engineer of the Mining Administration, and during the 1970's he combined productive work with a large amount of social work. He died in 1983.

In addition to me hundreds of skilled miners could have established the world record at that time. The happy choice fell on me, said A. G. Stakhanov. And indeed: 115 tons per shift was achieved during the night from 3-4 September 1935 by the party organizer of this same mine, M. Dyuknov, 125 tons--by the Komsomol organizer D. Kontsedalov on 5 September, and 175 tons--by Stakhanov himself on 9 September. On 11 September the leadership was taken over by the

famous Nikita Izotov--310 tons, and subsequently he increased the record output to 640 tons.

The movement swept rapidly outside the branch. In machine building in 1935 the first Stakhanovites were A. Kh. Busygin<sup>4</sup> (on 11 September he forged 966 crankshafts during a shift, and on 12 September--1,001, while the norm was 625) and I. I. Gudov (14 norms per shift); in the footwear industry--N. S. Smetanin (on 21 September he put out 1,400 pair of shoes while the norm was 650), in the textile industry--Maria and her relief worker Yevdokiya Vinogradova (on 1 October they serviced 100 machine tools while the norm was 26), and others. As soon as the news arrived about the record of the Donetsk miner, it was as though our eyes were immediately opened. It is necessary to utilize the existing equipment better, to organize labor more efficiently, to resolutely break outdated norms, and to achieve the greatest productivity. "At that time we did not think that our records would enter into a mighty flow which would be called the Stakhanovite movement," A. Kh. Busygin recalls even in our day.

Such rapid dissemination of this remarkable initiative is explained, in particular, by the skillful application of Lenin's principles of organizing competition. These include comparability of results, publicity and the possibility of repeating the advanced experience. Periodicals, oblast newspapers and PRAVDA immediately began to write about the records and methods of Stakhanov and his followers.

...Stakhanov's record has reinforced the ideas of P. F. Krivonos concerning better utilization of the production capacities of the steamship. He increased the technical speed of the locomotive to 47 kilometers an hour, and then to 70, while the norm was 23.5 kilometers. He persistently publicized the idea of utilizing the technical equipment by 100 percent. "With each trip," wrote Krivonos, "I improved the combustion chamber even more and regulated the operation of the machine better. I thought about how to draw other machine operators after me. I am a communist and I am obligated not only to work well myself, but also to help others."

The leading highly skilled workers were inspired by the successes of the innovators, they set new records and they brought their colleagues along with them. Even on 1 November 1935 in the iron ore branch there were 7.8 percent Stakhanovites, in ferrous metallurgy--6.6, the metal-processing industry--7.5, the chemical and textile--7.0 each, leather--5.9 and paper--3.6 percent. By August 1936 one-fourth of all the workers were Stakhanovites and 2 years later in some branches they comprised 40-47 percent. Behind this was new technical equipment and a new worker who had mastered the necessary technical knowledge. Stakhanovites not only fulfilled the norms twofold and more, but also improved the quality of products and worked without rejections. Gradually the movement began to have an effect in the large subdivisions. For example, in rail transportation the average daily load during October-December of 1935 was 75,000 cars instead of the 50,600 in January; at the Stalingrad and Kharkov tractor plants 200 tractors began to come from the conveyors each day instead of 144, and so forth.

But did everything go this well?



In light industry, in spite of the mass changeover to operating more than one machine tool, on the whole equipment was utilized inadequately. Approximately 50 percent of the workers did not fulfill the output norms for one machine tool. An investigation conducted by the industry division of the Central Committee of the VKP(b) showed that in eight factories of the silk industry, of the 1,480 workers who had transferred to intensified work, 59 percent failed to fulfill the output norms for the machine tool; in wool production these figures were 1,556 workers and 31 percent, respectively; at 19 cotton factories of the 1,654 workers who were operating more than one machine tool half did not keep up with these norms.<sup>5</sup>

The Stakhanovite movement did not develop uniformly. It was weak in such extremely large branches as petroleum, paper, peat extraction and nonferrous metallurgy. And in those branches where there were relatively large numbers of Stakhanovites, the movement included mainly workers in the leading occupations. Auxiliary shops were more or less left to the side. As a result, "bottlenecks" appeared. For example, in the coal industry underground transportation did not keep up with the removal of extracted coal, in machine building the casting shops did not keep up with the metal-processing shops in which the milling machine operators, lathe operators and drilling machine operators used high-speed methods. At the same time surpluses of various parts formed in the assembly shops. Formalism and bureaucratism as well as the desire on the part of individual managers to reduce the matter to "percentages" also impeded the development of the movement.

These shortcomings and ways of eliminating them were considered at the plenum of the Central Committee of the VKP(b) during 21-26 December 1935.<sup>6</sup> The plenum issued a directive to break the remaining resistance to the Stakhanovite movement on the part of conservative managers and engineering and technical personnel, to rally around it the broader masses of workers, to extend it to branches at productions that had not yet been encompassed, to move on to new technically substantiated norms, to expand technical training, and to promote the best Stakhanovites to more skilled work and management positions. It was necessary to move on "from individual records to Stakhanovite shops and enterprises, from Stakhanovite days to permanent work in the Stakhanovite way."

In the spring of 1936 norms were increased in the coal industry by 22-27.5 percent, in the petroleum industry--by 27-29, in the chemical industry for various productions--from 24 to 42.2 percent, and in machine building--from 28.5 to 55 percent. As a result, in 1936 labor productivity in industry increased by 26.1 percent, while the maximum annual increase during 1933-1935 was 15.6 percent. Many workers overfulfilled these norms. In 1937 they were again increased by 13-18 percent, they were rapidly mastered and in subsequent years they were revised again. During the 1st Five-Year Plan labor productivity in industry increased by 41 percent and during the second--by 82 percent, with a plan for 13 percent.

The year 1936 was declared a year of mass technical training; preliminarily, the content of the technical minimum was brought into line with the new tasks. The people's commissariats created a developed network of schools and courses



for training workers to meet the technical minimum. The plants organized Stakhanovite schools in which the innovators shared their experience. Special Stakhanovite production conferences were held. During 1936-1937 many innovators held the positions of brigade leaders, shop chiefs and so forth. A. G. Stakhanov, M. D. Dyukanov, N. A. Izotov, A. Kh. Busygin, N. S. Smetanin, Ye. V. Vinogradova, I. I. Gudov, P. N. Angelina and others were elected to the USSR Supreme Soviet.

The Stakhanovite 5-day work periods (on the initiative of the Magnitogorsk workers) and then later the 10-day work periods were a new form of mass enlistment of the workers in the innovative movement, a means of transferring entire enterprises over to work in the Stakhanovite way. The all-encompassing Stakhanovite brigades which included the entire production cycle helped to eliminate irresponsibility and confusion as well as impersonal work which give rise to defective products. Everyone in the brigade knew his supplier and all complaints were delivered to him.

#### The Years 1938-1945

At the end of the 1930's the operation of more than one machine tool went beyond the boundaries of the textile industry, where automated machine tools of the same type were used. The workers moved over to operating lathes and milling machines at the same time, carousel and one-two-stage, and so forth. This was combining occupations. The reason for running many machine tools of different types was the increase of the plan without increasing the number of workers. By 1940 in heavy machine building 20 percent of the workers had changed over to the new form of labor.

Combining occupations has spread actively to transportation as well. Tens of thousands of workers skillfully repair their own machine tools. The maneuvering of labor resources made it possible to utilize production capacities better and to increase the output of products with the same or even a smaller number of workers.

Special mention should be made of the years of the Great Patriotic War.

The mass Stakhanovite movement played an essential role in providing for the victory over fascist Germany. Under the conditions of the immense shortage of people, raw material and foodstuffs, and the movement of equipment to different bases, new forms originated: the front-line youth brigades "in labor as in battle"; the movement of the 200s, which grew into the initiative of 300s, 500s and thousands--"To Work for Yourself and Those Who Have Gone to the Front"; the competition for the output of above-plan products and the transfer of these to a special fund for the main command of the Red Army; the consolidation of brigades and divisions, the release of production commanders and highly skilled workers for other production sections, and so forth.

Typical features of the front-line brigades, which were conditioned by the extremely rapid growth rates of labor productivity, are high discipline, the latest devices and methods of work, maximum utilization of technical equipment, systematic study and transfer of advanced experience, combination of occupations, technical training, and creative assistance. These were

created, as a rule, in the more difficult, "bottleneck" sections of production. At one time the front-line brigades at certain plants imitated the form of the ranks of military units: they appointed as foremen--commanders and political instructors, they introduced a special oath of allegiance, and they held formations at work. This method of work is recommended by the Central Committee of the Trade Union of Workers in Ferrous Metallurgy in the eastern regions (March 1942). On 26 June 1942 the secretary of the AUCCTU abolished this instruction as erroneous: "The order should not replace the main thing in competition--the initiative of the masses."

In November 1943 the front-line youth brigade of Ye. G. Baryshnikova (First Bearing Plant, Moscow) asked the plant managements to transfer two of its highly skilled workers over to sections which were lagging behind. The brigade made a commitment, with a reduced staff (four people instead of six), to overfulfill the norms, to work without defective products, to save on electric energy and cutting instruments and to teach its mastery to new workers. At first Ye. G. Baryshnikova and the shop's technologist and foreman arranged the machine tools in a different way and developed improvements which made it possible to change over to having each member of the brigade handle two machine tools.

The central newspapers immediately found out about the brigade's initiative and at the beginning of December the Central Committee of the Trade Union of Workers in Middle Machine Building adopted a decree concerning the dissemination of this practice to all sections. On 1 January 1944 it was supported by about 7,000 front-line brigades, which released for other sections 27,000 skilled workers who were so desperately needed.

Ye. P. Agarkov, brigade leader of the front-line brigade which welds armored tanks at one of the Ural plants, went even further. At the end of 1944 the problem of skilled personnel was even more critical since many specialists were sent to the liberated regions in order to restore the plants. Agarkov suggested combining brigades of welders and assembly workers, and as a result the brigade leader, the senior foreman, two associated foremen and four welders were sent to other sections. Then after the reconstruction the productivity in the brigade increased approximately threefold. For his initiative Ye. P. Agarkov was awarded the Order of Lenin and was given the title of winner of the state prize. On 19 December 1944 the Central Committee of the Trade Union of Transportation and Tank Industry Workers adopted a decree which suggested to the plant committees that they take all measures necessary to support this initiative. In April 1945 because of this innovation alone, in the tank industry they managed to eliminate 115 small shops, 513 production sections and more than 600 brigades, and they also managed to release 6,000 people. The initiative of Ye. P. Agarkov showed the maturity of the workers who during the war years considerably increased their skills and, having accumulated experience, successfully managed consolidated production subdivisions.

It is important to note that enthusiasts of the new initiative have extensively shared their "secrets," taught in Stakhanovite schools, and trained newcomers directly at the machine tool. The newspapers wrote in

detail about the records and their dissemination. Individual achievements were transformed into a mass popular movement.

### The Postwar Years

The need to restore in the shortest possible period of time the national economy which had been destroyed by the war, the rapid construction of new and reconstruction of existing enterprises on a new technical basis, the change in the composition of the working class, and the shortage of workers, mainly those who are capable of working on first-class equipment, reinforced the existing forms of competition and brought new ones into life.

The movement of high-speed workers and the operation of more than one machine tool played a large role in the overfulfillment of planned assignments. But this was not enough. It was necessary to develop collective methods of Stakhanovite labor. They originated even before the war, but they become widespread under the fourth five-year plan. The initiators were the Stakhanovite cutters of the Moscow Footwear Factory, Parizhskaya Kommuna, V. I. Matrosov, the foreman of the Moscow Kalibr Plant, N. A. Rossiyskiy, and the engineer of the Fabric Factory Proletarskaya Pobeda (Moscow Oblast), F. L. Kovalev.

In 1946 V. I. Matrosov suggested that for each work position they develop a plan for the introduction of advanced labor methods (concrete organizational-technical measures, condensation of the work day, strict production discipline and so forth) which is intended for bringing all workers of the subdivision up to the level of the shock workers and the Stakhanovites. Matrosov became one of the first instructors in production training.

In 1947 N. A. Rossiyskiy through the newspaper TRUD called upon foremen to compete for bringing the backward sections up to the level of the leading ones, and for making all of them Stakhanovite. The leading foremen provided conditions for changing over to collective Stakhanovite work. Thus in Nikolay Rossiyskiy's section they strictly monitored the fulfillment of the schedule by each worker and they were personally responsible for the fulfillment of the planned assignments. Technical equipment and technology improve, complicated operations were broken down into smaller ones (as a result, the workers with medium qualifications were utilized more effectively) and technical training became just as mandatory as fulfillment of the plan was.

F. L. Kovalev, on the basis of the experience of many leading workers, developed the most efficient devices for performing each production operation in light industry. This organization of labor required highly skilled workers. During the 1950's technical training was developed at the enterprises on a broad scale.

In February 1949 the Secretariat of the AUCCTU, supporting the initiative of the assistant foreman of the weaving shop of the Moscow Krasnokholmsk Worsted Combine, A. S. Chutkikh, adopted a degree to develop socialist competition for excellent product quality in all branches of machine building. During 1949 the output of first-class products for the majority of items in light industry reached 80-90 percent, surpassing the assignments of the five-year plan. In

1950 in machine building and instrument building almost 3,000 labor collectives struggled for the title of brigades of excellent quality, in metallurgy--about 6,000, and in the textile industry--up to 60,000 brigades and sections. Entire enterprises with excellent product quality appeared: the Kupavinskaya Fabric Factory, the Moscow Trekhgornaya Manufaktura, the Krasnyy Oktyabr Factory, and others.

The movement for comprehensive economy and the output of products from the saved raw materials, processed materials and so forth was important for the first postwar years. There appeared personal accounts for economizing on materials for each worker, which reflected the results achieved each day. Even more concreteness was introduced into the competition for savings by the initiative of the leader of the brigade of excellent quality (Parizhskaya Kommuna Factory) L. Korabelnikova--to work one day a month using the materials that had been saved. Then they changed over from 1 day to 2 days.

In August 1981 the eminent Stakhanovites of the Moscow Footwear Factory Burevestnik sent out an appeal to reduce the production cost of products in each production operation. This competition forced the workers to study the economy. It included planning and accounting workers, and they made commitments concerning the organization of schools of workers.

During the 1950's quite definite shortcomings appeared in the organization of the competition. Far from all progressive undertakings of advanced workers were properly developed. Sometimes the attention was concentrated on individual initiatives to the detriment of the daily work with the broad masses. Drawn in by the fuss made about individual advanced workers, certain managers and trade union workers did not do a good job of organizing the transfer of advanced experience and did not provide conditions for the fulfillment of commitments by all competitors. As a result there was a deeper separation between the level of the labor of the advanced worker and that of the average worker. As before, one encountered formalism and bureaucratism, the commitments were sometimes poorly concretized, and the system of material and moral incentives was not sufficiently developed. Quite a few plants and factories continued to work irregularly, they did not utilize the fixed capital satisfactorily, and the down time of equipment sometimes reached 50 percent. Even at enterprises where innovations originated there were shops that regularly failed to fulfill the production program. The concreteness and comparability of the results were largely lost.

With time new decisions were found. Bilateral comprehensive plans were increasing labor productivity ("On the one hand, requirements for the administration which absolutely must be fulfilled, and on the other--responsive commitments from the worker himself") reduced formalism. The brigade of N. Ya. Mamay made a commitment for each worker to produce a ton of coal in excess of the norm each day. The result was taken into account concretely and on the spot.

"Previously few people knew the cost of a wooden support, rice coal or a kilogram of lubricant for the machine. And was there really anyone interested in the cost of electric cable or a ton of coal? Of course not. Therefore all of this was expended inefficiently, ineffectively, and was lost in the dumps.



And when people found out about this, they began to save on them," said A. A. Kolchik, whose brigade concretized its commitments even more--they saved a ruble on each ton of extracted coal and in the book where they recorded the materials were saved they carefully took into account the cost of extracting coal.

The main thing for this stage of socialist competition was the merging of various initiatives. From the beginning of the 1960's the competitors began to include in their contracts moral and ethical commitments as well: participation in work Saturdays and Sundays, supervision of schoolchildren, gathering scrap metal, maintaining public order and so forth. The content of the competition is being enriched even today.

The Stakhanovite movement was a direct continuation of the struggle of the workers for increasing labor productivity during the first years of Soviet power, the heroic communist work Saturdays, and shock labor. The historical experience in competition of the USSR confirmed Lenin's idea about the immense significance of developing the production initiative and activity of the workers. The competition opened up immense creative forces of the working class. The Soviet people were prepared for entering a new stage--nationwide socialist competition under the conditions of developed socialism.

#### FOOTNOTE

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4. See Belokrinitskiy, V. V., "The Busygin Forge," EKO, No 6, 1981.
5. Andreyev, A. A., "The Stakhanovite Movement and Our Tasks," speech at the plenum of the Central Committee VKP(b) on 24 December 1935, Moscow, 1935, pp 7-8.
6. The CPSU in Resolutions and Decisions of Congresses, Conferences and Plenums of the Central Committee, Vol 5, Moscow, 1971, pp 232-233.

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## EARLY STAKHANOVITE WORKERS COMMENT

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 8, Aug 85 pp 78-84

[Article: "The First Stakhanovites: Features in the Collective Portrait"]

[Text] P. F. Krivonos, engineer of the Slavyansk Depot of the Donetsk Railroad:

Once I saw a notice in the newspaper: Our people's committee had visited the engineers at the Sortirovochnaya Depot of the Kazan Railroad and set before them the question of how we should search for means of increasing the circulation and the average daily traveling distance of a steam engine. These means were clear to me, I had found them, but I was afraid: When we overfulfilled the assignments for running speed, we were threatened, complaints were drawn up, and they said that this was reckless driving. I went to the chief of the depot and said: "The people's commissariat has asked us to look for means of accelerating the circulation of the steam engine. Will you not punish us if we drive faster?" He said that since the people's commissariat had raised the question, he would do nothing.

...Now we have both young and old engineers who are providing excellent examples. For example one engineer who previously said that nothing would come of us, that when driving this fast we would drive all the steam engines off the track, that then we would have nothing to drive, now himself has produced a running speed of 50 kilometers. As you see, the method is being accepted. All of the engineers are now interested in this method.

V. A. Kolyvanov, dock worker of the Moscow Port:

When I saw in KOMSOMOLSKAYA PRAVDA the article about the record of Aleksey Stakhanov I immediately gathered together the members of my brigade and read them the article. We discussed it and gave our word to work according to the Stakhanovite method. I went to the port administration and announced that we had declared ourselves to be Stakhanovites. We were given the very worst job, in which not a single brigade in the port had fulfilled the plan by 100 percent. Having discussed this assignment with the brigade, I have the people their assignments and prepared the working place. We loaded 570 tons with an assignment for 350 tons.

That very evening I gathered together all the brigade leaders of our port and told them about our work and how to organize it. The best brigade leaders, Prokazian and Aleshin, announced that they were trying to surpass me. Prokazian's brigade on the next day loaded 600 tons, and Aleshin's--650 tons. Then my brigade became disturbed and I ran to the office: "Give us some work, we want to surpass these achievements." On the next morning we began to work and instead of the assigned 350 tons we loaded 704 tons. And this is far from all. We should create miracles once we have mastered the technical equipment!

A. G. Stakhanov on his public work during one of the days--27 April 1936:

I see that the problem is with our leaders who do not wish to organize their work well and conceal this. The government appointed me to be a member of the council under the People's Commissar of Heavy Industry. I told Comrade Ordzhonikidze about the fact that our managers are organizing things poorly.

The people want to work well. Each day the composition develops more broadly. And all the bugs are being worked out. Yesterday the metalworkers Karmanov and Kizh complained to me. "You know the problem is," yelled Karmanov, "that for an entire week now we have been telling the section chief that there is no need to send a third metalworker to the mine, that we would be able to handle it ourselves, but he will not listen. He is afraid that we will let him down." "It is embarrassing when there are Stakhanovites all around and you sit filling something like a norm and a half. We have requested, persuaded and demonstrated in practice that Karmanov and I can easily handle even two drifts. Why this lack of confidence in us? Help us to work things out," asked Kizh.

I went with them to the chief of the Almaz-Vostok section. We agreed that starting the next day Karmanov and Kizh would handle the air pressure for the section by themselves. Then I returned and the foremen of the face of the Beral-Zaped section, Yershkov, came up to me. For the third day in a row they had been sending him to a short benching area which gave him enough work for only a half shift. "The section chief thinks that two norms are enough for me. But I told him straight out that I could handle four. I demanded that they assign me a long benching area and told them that they must assign me a permanent drill operator for work in pairs. But they do not pay any attention to me," said Yershkov.

The pneumatic drillmaster Mikhail Fedchenko came to me with approximately the same request.... I spoke with the section chief. He took measures to immediately meet the demand of the Stakhanovite. I visited Mikhail. He lives in a small room. In due order we came to an agreement with the head of the mine that he as a Stakhanovite should be moved to a new apartment. I even pointed out which one. Fedchenko and I looked over everything: three rooms, a kitchen, a balcony and a pantry. He was very satisfied.

V. M. Molotov, chairman of the USSR Sovnarkom:

From a recent meeting with the group of workers in the timber industry I especially recall the story of Comrade Musinskiy. He has been working on a

frame of the Swedish firm Bolinder at the largest sawmill in Arkhangelsk. Since the administration and the engineering and technical personnel of the plant devoutly believe in their "peaceful" technical norms and have special monitors to check on their observance, Musinskiy began to operate in secret from the management, seriously discussing his every step with the brigade.

He surpassed the planned norm for sawing logs--35 cubic meters per frame-shift--and reached 130 cubic meters. At Musinskiy's request the administration assigned technical supervision over the work of his equipment and the quality of the products he produced. The results turned out to be good. Then Musinskiy and his brigade, with the support of the management and engineers, reached 221 cubic meters per frame-shift, significantly surpassing the output of the Swedish sawmills.

The significance of this example lies in the high intelligence of labor and bold initiative. Musinskiy was not afraid to test certain technical canons, and because of his high technical preparedness he came out a winner in the struggle against technical routing, and through his own successes he refuted certain "scientific" ideas found in the textbooks on sawmilling.

N. S. Smetanin, stretcher of the Leningrad Skorokhod Footwear Factory:

I was 30 years old and had been working continuously at the Skorokhod Factory for 18 years. I still recall its large, dirty, primitive shop. Now the factory has changed radically. If you go through it it seems to you that you are not seeing a shop in which people are employed in physical work, but a laboratory. The workers in clean robes stand at the machines, and there is cleanliness everywhere.

I love my factory, I love my country and I love my work--this is why I can produce even higher indicators!

...Up to this point many people thought that high productivity can be achieved only through physical overloading. No, this is not true. Nobody should think this. Labor productivity can be increased only when one has truly mastered the techniques of his work, is able to squeeze out of the machine the maximum that it will give, and has a conscientious attitude toward his work.

A. V. Dushenkov, lathe operator of the Nevskiy Plant imeni V. I. Lenin:

Even long before the Stakhanovite movement, I as someone who likes to set records overfulfilled the norm 3-4-fold. I shall not hide the fact that with this overfulfillment of the norm there was a regulation in wages. For example, I fulfilled 200 percent of the norm, and the payroll worker came to me and said: "Sasha, you have earned 200 percent, and we will have to cut you off." Well, you get what you pay for. But now I have earned 200 percent--and the payroll worker does not cut my wages.

...In my opinion, a Stakhanovite is a person who actually does take everything from the technical equipment, for he loves his work and his machine tool, he believes in the victory of socialism--the structure which gives him



the best life. All these factors create a situation in which we cover the existing norms jokingly, exactly as if they were a joke. We need new norms.

Another large issue: It is very good if Smetanin stretches 1,400 pairs of boots; it is very good if Stakhanov produces, say, 600 tons of coal. But it will be very bad if the 600 tons lie around, if they are not shipped out; it is very bad if the stretched boots are not finished. It sometimes happens that the toes of the boots crack. And it is bad when a person thinks: "Was it not Smetanin who made these boots? He stretched 1,400 pair and forgot about quality." It is necessary to put a stop to such conversations. Do we really have to come into the store and hear--"imported," that is, good. We should make everything that is Soviet better than what is foreign and destroy the word "import." It will do more honor to Smetanin when a person has worn the footwear for an entire year and says: "See, Smetanin works well, he produces 1,000 pairs of boots and the boots can be worn for an entire year." Will it not be pleasant when they say: "There, look at Dushankov--he did not slough off, but made a good part." It is necessary to struggle precisely for quality. And this is the main thing in the Stakhanovite movement.

N. I. Slavnikova, drill operator in a defense plant:

Among the delegates to the conference I do not know of a single woman who can produce the indicators that Marusya Makarova and I do. And I do not think that we shall stop here; we shall go further.

Our normed earnings are 158 rubles a month. In September I earned 462 rubles, and in October--886. I could have made more but there were days when they took me away from work. In October Marusya made 1,330 rubles. I did not know what to do with all the money. I asked Marusya about this. She said: "Buy yourself cream-colored slippers for 180 rubles, a crepe de chine dress for 200 rubles and a coat for 700 rubles."

I. A. Likhachev, director of the Automotive Plant:

We changed the shop chiefs and their deputies over to the piece-rate-plus-bonus payment and gave them only two indicators: quantity and production cost. For after all the latter includes everything--labor force, overhead expenditures, economizing on fuel and so forth. For example, the chief of the forging shop in September earned 147 percent of his wage rate, and in October--about 200 percent. Now he goes through the shop and looks to see where he can economize and what else he can do to increase the profitability of his shop. With such forms of payment the shop chief will undoubtedly support and lead the Stakhanovite movement.

I. I. Melamed, technical director of the First Ball-Bearing Plant:

During the first half of 1935 our plant produced approximately 1.1 million bearings a month, that is, 70-75 percent of the plan. It is too bad that everyone had become accustomed to this. We had even created a theory which placated us that we were short thousands of machine tools which would be needed to reach the planned capacity of 24 million bearings.

When the first news about Stakhanov came we decided that this did not pertain to us. But when we found out about Busygin's work, we understood that we had been mistaken. It is curious that even the smallest steps in improving the organization of work and preparing the workplace immediately produced positive results.

...I wish to take note of an interesting feature which the Stakhanovite movement introduced into engineering work at the plant. Previously the chiefs of the shops and sections usually came to see me only at the end of the month, when they were drawing up the program for the next month. Those who complained about its difficulty were assisted with additional equipment or an increased number of workers. This was considered to be a good attitude. Having enlisted in the Stakhanovite movement, we changed the approach. For example, when we planned the program for October, the chief of the shop for roasting demanded that extraordinary measures be taken and that all the furnaces be assembled (the number of furnaces in operation in the shop was 30 percent less than planned). Before the Stakhanovite movement we would have gone to the people's commissariat and put pressure on everyone. Now, instead of the capital construction division, we enlisted the laboratory in this matter in order to search for ways of increasing the productivity of the furnaces. The people working in the laboratory study the results of the work of the furnaces, question the workers about maladjustments, and many of them were eliminated. Within 3 days the output began to increase: from 38 slips a day to 41, and then 45, 48, 50 and 55.

In all of the sections wherever we looked we found possibilities of increasing the output of products which we previously had simply not noticed. Then the plant asked the people's commissariat to increase the program for 1935 from 25 million to 27 million ball-bearings.

A. A. Zhdanov, secretary of the Central Committee of the VKP(b) and first secretary of the Leningrad Oblast and City Party Committee:

At certain enterprises the Stakhanovite movement encounters resistance from opportunistic conservative elements in party, economic and trade union organizations and from the other workers. Conversations were started in which they said that if we were to develop the Stakhanovite movement the plan would be increased, it would be necessary to organize supply in a different way, and in general there would be trouble. They did this in order to get out of organizing the Stakhanovite movement. But we came down hard against these attitudes, straightened things out, brought the saboteurs to order, and let them understand that the party would stop at nothing to remove all resisters from the path of the victorious movement.

Take, for example, certain work methods in the area of the rate policy. The practice of norm setting for labor and the organization of wages had not yet been brought into line with the tasks of the Stakhanovite movement. For it really was a fact that at a number of our enterprises any overfulfillment of the norm entailed an immediate revision of it and the reduction of the rates, which held back the breakthroughs of the leading workers toward increasing labor productivity. With this equalizing policy certain leading workers who

could have produced considerably greater labor productivity and more products, remained to the side of the struggle for high labor productivity.

In Leningrad a movement began for revising the new capital investments for the enterprises, revising the calculations for new technical equipment, and revising the quantity of the labor force. But there were already leading directors who announced that they do not require additional capital investments, machine tools or workers and at the same time they would fulfill the five-year plan in 4 years.

The Stakhanovite movement brings forth new tasks in the area of the development of socialist culture in order to satisfy the growing demands of the working class. Here at the conference we have discussed the fact that we do not have enough record players, radios, musical instruments and so forth. Correct approaches....

The Stakhanovite movement cannot but bring about higher demands also for the very organization of the cultural work of the trade unions, the People's Commissariat of Education, the People's Commissariat of Public Health and so forth. Our public education agencies, trade unions and public health agencies are extremely far behind, and even the managers of these organizations and institutions do not yet pay the proper amount of attention to living people. The party and trade union organizations should immediately eliminate this arrears and place at the center of their attention the concern for the material and cultural service of the leading workers.

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## PROGRESS OF ECONOMIC EXPERIMENT RELATED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 8, Aug 85 pp 85-105

[Article by G. S. Mergelov, doctor of economic sciences, chief of the financial administration of the USSR Ministry of the Instrument Making, Automation Equipment and Control Systems (Moscow): "It Is Time for More Decisive Steps"]

[Text] The Path To Improving the Economic Mechanism

During the past 2 decades in the country we have systematically been implementing measures directed toward improving the management of the economy and particularly industry. But their results have not been the same in various stages. According to the estimates of many economists and management experts, the most appreciable effect was achieved during the course of the economic reform conducted on the basis of the decisions of the September (1965) Plenum of the CPSU Central Committee. Conditions were created for a real expansion of the rights of the enterprises, a strengthening of economic methods of management, and a larger role for economic levers and stimuli and their influence on the final results. Predictably, with the changeover to the new system of planning and economic incentives in the second half of the 1960's and the beginning of the 1970's, in industry there was a considerable increase in the growth rates of production, labor productivity and profit. The growth rates of the national income increased as well.

But in subsequent years, when the development of productive forces required further modernization of the economic mechanism, the unionwide measures in this direction were not conducted as actually was intended. And this did more than just affect the rates of economic growth. Individual experiments, even those in which on the whole positive results were achieved (in the Ministry of the Electrical Equipment Industry, the Ministry of Instrument Making, Automation Equipment and Control Systems and a number of other ministries), were not developed and essentially were not completed. The main reason for the failure was that we had not yet managed to transform the five-year plan into the main form of planning of economic activity. The desire for excessive centralization in planning and managing the economy, one born of an inertia, also had its effect.



Experience shows that only a purposive, interconnected change in all units of the system of management can provide a positive result. In this connection exceptional importance is attached to the decision adopted by the December (1983) Plenum of the CPSU Central Committee to develop and implement a program of comprehensive improvement of the economic mechanism. Its main sections, as we know, can be reduced to the following:

improvement of the organizational structure of management at all levels and in all units of the national economy, including a clear-cut determination of the functions, rights and responsibilities of management agencies and enterprises;

improvement of the system of planning the national economy on the basis of the requirements for increasing the socioeconomic effectiveness of public production;

increased effectiveness of the entire totality of economic levers and stimuli of the economic mechanism, including price-setting, the credit and financial system and methods of evaluating the results of economic activity.

The party's indication of the need for developing on a broad front the improvement of the management of the economy and the restructuring of the economic mechanism should be regarded as an orientation of the party Central Committee toward a decisive change in outdated forms and methods of control, planning and management. In essence, we are speaking about a practical solution to many interconnected problems which would make it possible to raise to a qualitatively new level the entire system of management of the economy and to create objective conditions for the effect of intensive factors in the development of the national economy.

Important steps have already been taken in this direction. In July 1983 the CPSU Central Committee and the USSR Council of Ministers adopted the decree "On Additional Measures for Expanding the Rights of Industrial Production Associations (Enterprises) in Planning and Economic Activity and for Increasing Their Responsibility for the Results of Their Work," which earmarked the main principles of the economic experiments in a number of union and republic ministries: the UkrSSR Ministry of Heavy Industry, Ministry of the Electrical Equipment Industry and Ministry of the Food Industry; the BSSR Ministry of Light Industry, the Lithuanian SSR Ministry of Local Industry (the concrete conditions were set by the corresponding decisions of the government).

It is still too early to determine the degree of effectiveness of the new methods of control and management, since they have not been in effect for very long. Nonetheless the first results of the work inspire hope: in 1984 the plans for the main indicators (production volumes, labor productivity and profit), taking into account the additional assignments, were successfully fulfilled by the majority of enterprises and associations participating in the experiment; there was a marked improvement in the observance of contractual commitments for the delivery of products. Thus the associations and enterprises of the Ministry of Heavy Machine Building raised the level of deliveries under agreements to 99.4 percent, the Ministry of the Electrical Equipment Industry--to 98.7 percent, and in the UkrSSR (Ministry of the Food

Industry, the BSSR Ministry of Light Industry and the Lithuanian SSR Ministry of Local Industry they achieved complete fulfillment of these.<sup>1</sup> Increasing the preplanning period contributed a great deal to this. Now the enterprises can begin to work on the plan considerably earlier, and can conclude agreements more actively.

Since 1 January 1985 the boundaries of the experiment have expanded considerably. Another 21 ministries have been changed over to the new conditions of planning and economic incentives, including five union ministries: the Ministry of the Machine Tool and Tool-Building Industry, the Ministry of Agricultural Machine Building, the Ministry of Instrument Making, Automation Equipment and Control Systems, the Ministry of Chemical Machine Building, and the Ministry of Power Machine Building. A basis has been laid for the application of the new methods on the scale of all industry and the sphere of services.

As experience shows, it is important to observe the conditions of the experiment unwaveringly and not to depart from its main methodological provisions (as has frequently been the case in the past). Then one can objectively evaluate the results. At the same time it would be a deception to think that the experiment will make it possible to solve diverse problems immediately and to eliminate the shortcomings in all units of the economic mechanism. Improvement of the system of management of production is a continuous process.

We should like to express certain considerations about the ways of improving the economic mechanism which are based on the work experience of the branch under the conditions of the experiment, discussing unsolved problems especially.

#### Increasing the Organizing Role of the Five-Year Plan

The main condition for success in this restructuring is the improvement of planning. It is necessary to ensure balance of the five-year plans and their stability in the main areas and in all units.

More than 5 years ago the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979 pointed out to planning agencies the need to raise planning to a qualitatively new level. To do this it is necessary to increase the role of long-range plans, to apply the program-target method extensively, and to introduce a system of scientifically substantiated technical and economic norms and normatives. But this requirement is far from being fully met, and in the plans for production and material and technical support there are disproportions just as there were before. Another area of criticism is the fact that certain base branches are lagging behind in the fulfillment of planning assignments. Frequently the production plans are not backed up with funds for material resources, and the deliveries of equipment (especially for enterprises that are in operation) are frequently not coordinated with the plans for financing capital investments. All this considerably weakens state planning discipline.

The kind of planning of the output and delivery of products which does not take into account the real possibility of introducing production capacities and preparing production for newly constructed and reconstructed objects also leads to a lack of balance. Tardiness in putting production capacities into operation has become a chronic problem. As a rule, this leads to shortages in the deliveries of products and disproportions in the fulfillment of the plan. To a considerable degree material and financial reserves should provide for balance and stability of the plans (especially five-year plans). Their creation is envisioned by a number of state normative acts. But in reality we have no such reserves, especially material reserves. In connection with what has been decided, the branch ministries, associations and enterprises are gradually changing over to cost accounting financing and normative distribution of profit between the business and the budget, and the role of financial reserves is increasing essentially.

In keeping with the conditions of the economic experiment production associations (enterprises) have been given the right to form financial reserves in the amount of up to 5 percent of the normative of internal circulating capital. These reserves can be created from the above-plan profit that remains at their disposal and the incentive increments to the wholesale prices for products. But the practice of enterprises of the electrical equipment industry and especially the Ministry of Heavy Machine Building has shown that these sources are inadequate. Obviously it is necessary to think about forming a certain part of these reserves on a planned basis.

Material and financial reserves, in our opinion, should be created at all levels of management--from the central planning and supply-sales agencies to the enterprises. Without this it is difficult to provide for stability of the plans, to prevent violations of financial discipline, and also to avoid removal of circulating capital from the budget in those cases when the enterprises that have been changed over to the normative method of distribution of profit are obliged to make planned payments, regardless of the results of their financial and economic activity.

The force of inertia and the adherence to methods which have become established but not always justified also have an effect on the quality of the plans. Delay in the development and approval of technical and economic norms and normatives, and also inadequate utilization of passports of enterprises leads to the determination of planned assignments on the basis of the level that has been reached. As has been repeatedly noted, this practice gives rise to disproportions in planning, impedes the changeover to the drawing up of plans from below, complicates conditions for the operation of enterprises that are working well, smooths out the shortcomings of those that are lagging behind in their work, creates preconditions for freezing of reserves and, in the final analysis, acts in the opposite direction of providing incentive for a more difficult plan.

Including an excessive number of details in the plans also leads to a lack of balance. It is known that the more there are of these, the more difficult it is to achieve stability of the plan. Unfortunately, up until recently the restructuring of methods of planning has been basically reduced to expanding



the number of directive indicators, and this has complicated the work even more.

Expansion of the economic activity of the enterprises should reduce the number of planning indicators that are established from above. Under the conditions of the economic experiment their number decreased somewhat, but this is, as it were, "de jure." Actually there were just as many indicators since some of them were changed over to the category of calculated (one frequently finds this opinion on the part of directors of enterprises in the press). For example, the "volume of commodity output" and the "volume of sold products" are considered to be calculated indicators, but in order to evaluate the work of enterprises in the territorial cross-section they are considered to be the most important just as they were before. One should also keep in mind that many calculated indicators serve as a basis for the formation of established indicators, and therefore they are actually given "from above." New indicators have also appeared, "reduction of material expenditures on the production per ruble of commercial product. Funds for sociocultural measures and housing construction increase or decrease depending on this at enterprises of a number of ministries that are participating in the experiment (Ministry of the Electrical Equipment Industry, Ministry of Instrument Making Automation Equipment and Control Systems, Ministry of Chemical Machine Building and the Ministry of Power Machine Building).

The force of inertia is also manifested, unfortunately, when evaluating the fulfillment of five-year and annual plans. As early as 1979 it was recognized as expedient to evaluate them by a running total.<sup>2</sup> But many higher and local agencies, just as before, demand that the enterprises fulfill monthly production plans. It is not difficult to understand that the need to provide for the fulfillment of a plan each month in those cases when the plan for the production and delivery of products for the corresponding period has already been fulfilled objectively stands in contradiction to efficient methods of management. This practice frequently gives rise to unjustified rush jobs in production, overtime work, and overexpenditure of the wage fund, and it has a negative effect on product quality. This requires, as a rule, additional material resources and involves certain disproportions in supply. It would seem that strict observance of the policy for evaluating the fulfillment of the plan established by the directive agencies would make it possible to avoid many nonproductive expenditures and would contribute to strengthening cost-accounting at the enterprises.

Improving planning as a whole and also reducing the number of directive indicators and the established products list will make it possible to change the functions of planning agencies. It has already been noted repeatedly that including details in planning, concentrating forces on secondary issues and interfering in the operational affairs of the ministries and departments diverts the central economic agencies from the cardinal problems of management. Is this not one of the reasons for such slow restructuring of planning and material and technical supply?

The decree of the CPSU Central Committee and the USSR Council of Ministers of 14 July 1983, "On Additional Measures for Expanding the Rights of Industrial Production Associations (Enterprises) in Planning and Economic Activity and



Increasing the Responsibility for the Results of Their Work," and subsequent decrees of the government concerning the changeover of individual branches of the economy to the economic experiment measures are envisioned for expanding the rights and independence of production associations and enterprises. These issues are directly related to a revision of the functions of the higher levels. Therefore, in addition to improving the methods of management in the main unit, it is necessary to reorient planning agencies toward solving large national economic problems, having essentially increased and clarified their responsibility for the quality of the plan. At the same time one should concretize the functions, rights and forms of responsibility of branch ministries and union and republic industrial associations.

Through the years it has turned out that the economic agency responsible for the fulfillment of the plan is the one that carries it out, and the planning agency, as a rule, plays the role of a critic. At the same time in practice there are many examples in which the enterprises end up in a difficult position by the fault of planning or higher economic organizations. In these cases is it fair to shift to them the responsibility for the failure to fulfill the plan?

Let us give just one example from the practice of the Ministry of Instrument Making, Automation and Control Systems. It is known that at the beginning of the 1980's there was an increase in prices for jewelry items. For this reason, and also because of the saturation of the market, the demand for them decreased. But in spite of the calculations of the Ministry of Instrument Making, Automation Equipment and Control Systems and the Ministry of Trade, in 1983 it was planned to have a considerable increase in the output of jewelry items. And although the production plan was adjusted at the end of the year, many prepared products and costly materials piled up in the warehouses of trade organizations and the manufacturing plants.

Under these conditions the industrial enterprises, being the scapegoats, sustain appreciable losses--they make additional payments into the budget from their own funds for above-normative supplies and they pay high interest on credit. And yet the agencies that planned the surplus production volumes bear no economic responsibility at all.... One must say that this situation is being repeated, although on a smaller scale, in 1985: instead of establishing the production volume at the level of the sums of items sold at the wholesale trade fair, their output has been planned considerably in excess of the agreements between the enterprises and the trade organizations.

It would seem that the responsibility should be borne by that agency which has established (at any level--from the Gosplan to the association) the unrealistic or unbalanced planning assignments, and the enterprises and economic organizations should be responsible for their own shortcomings and omissions which have led them to failing to fulfill the assignments.

At the April (1985) Plenum of the CPSU Central Committee the output of consumer goods for which there is no demand was justifiably criticized. And yet the evaluation of the fulfillment of the plan contributes to this: up to this point, in spite of common sense, this evaluation is made not according to

the indicator of sold products, but according to the volume of produced products, that is, the commodity output. Strange as it may be, today it is enough to produce the products and put them in the warehouse--and the report that the plan for the production of goods for cultural and domestic purposes was fulfilled. Herein, in our opinion, lies one of the main reasons for the accumulation of above-normative supplies of prepared products in the warehouses of the enterprises. Apparently the fulfillment of the plan for consumer goods should be determined only on the basis of the fulfillment of the sales volumes, taking into account deliveries under agreements. Then plants will produce only those goods which the population actually needs.

The economic inequality among industry, trade organizations and the Ministry of Foreign Trade should also be eliminated. Apparently it is necessary to limit the right of the latter to reject products that have been ordered throughout the course of the year and to envision forms of compensation for damages. This will undoubtedly increase their responsibility to industry and make them study the sales market more attentively (both domestic and foreign).

#### Level of Organization of Material and Technical Supply

This is linked most closely to the increased balance of the plans and the discipline for deliveries under agreements. The organizational aspect of the matter is also important: the search for and application of new, progressive forms of providing enterprises with material resources.

As we know, a great deal of attention was devoted to strengthening delivery discipline in the economic experiment. Material incentives for complete fulfillment of the contractual commitments by the enterprises and associations were essentially increased. At the same time additional economic sanctions were introduced for shortages in the delivery of products, which are returning to the material incentive funds of the collectives and associations.

But in the national economy as a whole not very much has been done so far. In particular, there has been no development of such a form of supplying production as guaranteed comprehensive supply on the basis of agreements between the associations and agencies of the USSR Gosplan; the changeover from centralized delivery of products to the consumers from the supply-sales basis of territorial supply agencies has not been completed. In essence we have not fulfilled the decisions adopted as early as the 8th Five-Year Plan concerning a gradual changeover to planned distribution of material resources through wholesale trade, although this kind of restructuring opens up the prospect for a radical improvement in material and technical supply.

When rationalizing their inactivity in this area, people usually refer to the shortage of various kinds of material resources. But references to shortages, in many cases, cannot be recognized as convincing. Each year industry not only fulfills, but overfulfills production plans, and, consequently, in the final analysis, there are enough materials and batching items. It seems that the problem can be reduced basically to correct and balanced distribution of them.

One cannot but recognize that today even the availability of funds for material resources still does not guarantee obtaining the materials or batching items necessary for production. And interruptions in their supply violate planning discipline and, as a rule, turn a realistic plan into one that cannot be fulfilled. Enterprises are forced to rearrange production while in operation and to change the plans for a broad list of products, which inevitably entails a steady increase in above-normative supplies of commodity and material values in incomplete production and in the warehouses. This is why thousands of "pushers" of various ranks (from the simple supply worker to the general director of the association) are always traveling around to the various cities and using all possible methods to obtain various materials, batching items and equipment, for which funds have been allotted in the majority of cases. On the scale of the country this amounts to millions of wasted man-days and hundreds of millions of rubles in state funds.

How does one introduce order into material and technical supply? First of all it is necessary to reach a point where the supply agencies carry out previously adopted decisions regarding these issues, particularly regarding guaranteed comprehensive supply on the basis of agreements with agencies of the USSR Gosplan. It is time to complete the changeover to centralized delivery of products to the consumers from the supply and sales bases of the territorial agencies. It is necessary to eliminate the formal allotment of funds for material resources which are in categories where there are shortages, as a result of which many industrial enterprises cannot realize these funds. At the same time materials and batching items which are in short supply accumulate at other enterprises and are declared to be surplus. In order to avoid the chain reaction of shortages of deliveries of products that are related to delayed startup of production facilities and to eliminate the difficulties in realizing funds, the volume of products of enterprises that have been introduced in the planned year should be fully or partially included in the reserve for the distribution of the USSR Gosplan.

The system of bonuses for workers in territorial agencies and bases of the USSR Gosplan does not contribute to improving material and technical supply either. Just as before, it is oriented toward the overall commodity turnover and not toward the concrete needs of the enterprises. It is time to strengthen the cost-accounting foundations in the activity of supply agencies, to make the incentives for their workers directly dependent on the degree of satisfaction of the needs of the enterprises, and to increase the responsibility for supplying the national economy up to the level of responsibility of the enterprises for the fulfillment of contractual commitments for delivery. This measure, in our opinion, would force supply in sales agencies to take a more active and interested position and to give more consideration to the consumer.

The level of material and technical support depends to a considerable degree on the development and strengthening of direct long-term economic ties among production associations and enterprises, and also on their contacts with supply-sales, transportation and trade organizations. Every enterprise is at the same time both a consumer and a supplier of one product or another. Is it really necessary to speak of how important the reliability of the partner is when fulfilling the production program?

Recently measures for strengthening delivery discipline and developing direct economic ties have had an effect: the fulfillment of contractual commitments has improved somewhat. But still this area of economic relations cannot but cause serious concern. There is still a large number of enterprises and associations that are not completely fulfilling contractual commitments, and the overall sum of delivery shortages in the country is expressed in many millions of rubles.

Adjusting production plans in the direction of reduction has a negative effect on delivery discipline. This violates economic ties and causes a chain reaction of shortages in the delivery of products in the national economy with all the consequences that ensue (failure to fulfill the plan in terms of volume indicators, profit and payments into the budget).

### Strengthening Material Incentives

The creation of material interest in highly productive labor in combination with effective moral stimulation is one of the defining principles of cost accounting. We know the great significance V. I. Lenin attached to this: "Without personal interest not a thing will happen," he wrote. "It is necessary to be able to motivate people."<sup>3</sup> He quite pointedly raised the issue of sanctions against negligent workers as well. Thus when directing a letter to the Politburo of the Central Committee of the RKP(b) and pointing out the need to change employees (everyone who was involved in economizing) over to bonuses from circulation and from profit, at the same time he emphasized: "With a severe penalty for losses, sluggishness, indifference...."<sup>4</sup> V. I. Lenin's instructions remain as crucial as ever even today.

Material incentives for the workers, as we know, have two channels: wages and the system of bonuses. In our opinion, it is necessary to strengthen material incentives for people who are working well and to make economic sanctions more severe when it comes to unconscientious workers who frequently receive wages simply "for coming to work." It is necessary to deprive violators of labor discipline of the possibility of being protected by constitutional guarantees, living at the expense of others' labor and taking advantage of the benefits from public funds without making any payment. The system of moral incentives should provide for an objective valuation of the worker's labor contribution. It is important for everyone to feel a direct link between the labor he expends and the remuneration he receives.

Recently measures have been taken to strengthen the dependency between material incentives and the quantity and quality of labor. An example of this is the introduction of the collective contract if it proceeds in a deliberate way, without formalism.

Within the framework of the experiment that is being conducted for expanding the rights of the enterprises, their managers have been given the right to establish, with the agreement of the trade union committees, increased additional payments for highly skilled workers who are employed in especially responsible jobs (up to 24 percent of the wage rate, depending on the



category) and also for engineering and technical personnel and employees--up to 50 percent of the salary, taking into account their personal contribution.

On the whole, good results were also obtained during the course of the experiment for improving wages in design and technological subdivisions. It is being conducted in a number of Leningrad production associations and envisions the performance of a larger volume of work with fewer designers and technologists. Here increasing the material incentives for this category of workers is combined with increasing the responsibility for the technical level and quality of the developments. Since 1965 the positive experience of Leningrad associations has been developed in many associations and enterprises of a number of branches.

The need for intensification of production demands a resolute changeover to progressive forms of wages and the utilization of labor resources in all branches of the national economy (including in science). This can be done on the basis of the development and deepening of principles of the Shchekino method, which with correct application provides for an essential increase in labor productivity. To do this we should, in our opinion, permit managers of enterprises and institutions, when they reduce the number of workers, to utilize up to 90 percent of the released wage fund for a differentiated increase in wages (of 50 percent and more) of engineering and technical personnel, workers and employees who are working well. At the same time more severe administrative and economic sanctions should be applied against violators of labor discipline, right down to the point of reducing their basic wages.

It would seem that these measures, in addition to essentially increasing labor productivity and strengthening labor discipline, could produce another important result as well--they could partially solve the problem of the shortage of labor resources in the national economy, which is being generated not only because of the existing demographic situation, but, perhaps to a greater degree, because of the low labor productivity.

The experience in applying the Shchekino method gives justification for asserting that these measures will produce an effect only if the wage fund is planned on the basis of stable long-term normatives whose observance is guaranteed by the planning and higher agencies. The managers of enterprises, organizations and institutions should be convinced that the wage fund established by the five-year plan will not be adjusted in the annual plans in spite of a reduction of the number of workers.

The system of bonuses has needed to be put in order for a long time. There are dozens of them in effect at enterprises today, and only experienced workers of divisions for labor and wages can figure them out. And when the workers sign the payroll they frequently do not know why they are receiving a bonus. It is understandable that such "incentives" do not meet the requirements of life.

The unity of the interests of all production units requires increasing the effectiveness of bonuses in the staffs of all-union (republic) industrial associations and branch ministries as well, where bonuses have become symbolic

in the majority of cases. To do this it would be expedient to establish the amount of the bonuses for workers of the VPO staff at the level of a percentage of the wage fund that is paid to engineering and technical personnel and employees at enterprises under their jurisdiction, and for the ministry staff--according to the average percentage in the industrial associations under their jurisdiction.

#### Sponsors and Sponsorees

The development of intensive methods of management and the changeover to paying for labor according to the principle of the Shchekino method require bringing order into the interrelations between industry and sponsored and other businesses (kolkhozes, sovkhoses, construction projects, vegetable bases), which take advantage of its labor resources free of charge, thus weakening the planned cost-accounting basis for management.

In November 1983 the Politburo of the CPSU Central Committee pointed out some shortcomings in the organization of sponsor assistance and noted that in a number of cases the local agencies had unjustifiably diverted labor resources from the main productions in quantities that exceeded the actual need. This does not contribute to strengthening discipline and order.

Workers of industrial enterprises are not taken away just for agricultural work. Frequently the local agencies also give them other nonplanned assignments which are not related to the basic activity of their economic organization (the building up of population points, construction and repair of public facilities and so forth). The enterprise frequently does not have either the material or the labor or the financial resources to carry out these assignments. This forces it to use any means to seek out "reserves," to resort to various "economic tricks," and the main thing--to take workers away from the performance of their basic duties. The enterprise includes the unplanned expenditures for these jobs in the production cost of the products which, naturally, has a negative effect on the overall results and in the final analysis weakens the effect of the law on labor collectives.

At enterprises which divert significant labor resources into outside jobs under the policy of sponsorship assistance, as a rule, the output of products is reduced, their quality deteriorates and fines increase. In many cases there is a sharp increase in overtime wages, there is an overexpenditure of the wage fund and there are other violations which are dispassionately registered by financial and bank agencies and are blamed on the managers. Moreover neither the sponsored businesses nor the local agencies bear responsibility for the unsubstantiated diversion of labor force and materials from the basic production.

Such a practice, naturally, leads to a distortion of indicators for labor productivity, production cost and profit both in industry and in agriculture, it impedes the application of economic normatives, and it gives rise in individual managers of businesses to independent ceilings and a desire to fulfill the plan "through other people."

The relations between businesses that use outside labor resources and the enterprises which offer them, in our opinion, should be regulated by agreements which should envision the volume of work, its cost, the time periods for carrying it out, the policy for payment and the number of workers. Then any manager, before calling for assistance, will carefully weigh what it costs. At the same time it is necessary to introduce reports, both in the outside businesses and at the plants, which prevent distortion of the production cost, labor productivity, the actual wage fund and other dependent indicators.

#### The Scientific Research Institute and Design Bureau--On a Cost-Accounting Basis

The decree of the CPSU Central Committee and the USSR Council of Ministers of 18 August 1983 earmarked a complex of measures directed toward acceleration of technical progress. It seems to us that they should be strengthened with the help of economic levers and stimuli, by placing the activity of branch scientific research and design organizations on an authentic cost-accounting basis.

Branch scientific research and design bureaus, as we know, formally have the status of cost-accounting organizations, but since profit is not planned for them one cannot speak seriously about the cost-accounting nature of their activity. Understandably, such important elements of cost accounting as self-repayment, material interest and economic responsibility can be manifested here only in a palliative form. It would seem that the thematic plans of branch scientific research institutes and design bureaus should be formed (under the supervision of the ministries and all-union production associations) mainly on the basis of agreements with industrial and other enterprises and organizations. Then research work (15-20 percent of the volume) could be financed from the Unified Fund for the Development of Science and Technology (YeFRNT). The agreements should stipulate: the basic technical and economic characteristics of the instrument (machine, technological process), the time periods for development and introduction, the cost of the work, and the responsibility for its quality. The calculation should include the norm of profitability which would enable the scientific research institute and design bureau to operate through its own profit, that is, on the basis of complete self-repayment. A certain part of the profit, obviously, should go into the budget. If the developer has not achieved the result envisioned by the agreement the client can refuse to pay for the work, and the expenditures that are made will be included in the losses of the organization performing the work or will be compensated for from the risk fund which is created from the profit.

It would be correct to evaluate the quality and effectiveness of the work of internal subdivisions (divisions, laboratories) of the scientific research institutes and design bureaus depending on their real contribution to the overall economic results of the activity of the organization. Their work can be organized on the basis of internal cost accounting, proceeding from the principle of "expenditures--results."

In our opinion, the profit obtained by the scientific research institute and design bureau, along with the national economic effect from the introduction of the development and the ability of the newly created technical equipment to compete on the international market, should become the main criterion for their work. The activity of scientific research institutes and design bureaus could be stepped up by the introduction of progressive forms of payment for labor on the basis of the Shchekino method or the Karpov experiment (now forgotten) which is similar to it. This would make it possible to eliminate the "ballast" of labor resources, to reduce the number of workers and, through high earnings, motivate those who are capable to work productively. In our opinion, herein lie no small reserves for increasing the effectiveness of the work of scientific and design organizations.

We must not fail to touch upon one more problem. The complication of the economic mechanism causes serious concern. The fact is that its improvement is accompanied, unfortunately, by the superimposition of new methodological instructions, provisions and guidelines, which are issued by central economic departments and branch ministries. Just in the development of the aforementioned decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979 the union economic agencies published about 60 sets of detailed methodological materials, whose overall volume amounted to hundreds of pages. Some of them have already become outdated while certain others continue to be in effect along with many instructions issued in 1965-1979 and in subsequent years.

Today it is difficult even for experienced economists to make their way through the labyrinth of various methods and provisions. Those who compile the instruction materials, who are sometimes far removed from practice, usually proceed from the principle "What needs to be done," and they do not always have a clear idea of the difficulties of its practical application. This pertains to planning, financing, credit and especially material incentives (the formation and utilization of incentive funds in the application of numerous bonus systems).

Nor can one fail to take into account the fact that the complication of the economic mechanism is taking place in parallel with a reduction of the administrative staff in many units of production. This pertains first and foremost to workers in the economic services of enterprises (planners, financial experts and bookkeepers), that is, the workers of those subdivisions which receive most of the work for introducing new forms and methods of management. Understandably, this cannot but be reflected in the quality of the economic work at the enterprises and the level of management of production as a whole.

Perhaps the conditions of the experiment will make it possible to pay attention to the opinion of authoritative production leaders who have repeatedly expressed themselves in the press: it is time to give managers of production associations and enterprises the right to determine independently the number of administrative and management personnel within the limits of the overall wage fund. Who knows better than the director how many workers he should have for the most effective management of production? The main thing



is that this staff meet a basic requirement--the fulfillment of the state plan in terms of physical and value indicators.

#### FOOTNOTES

1. "A Time of New Accomplishments," IZVESTIYA, 1 January 1985.
2. Decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979--Moscow, Politizdat, 1979.
3. Lenin, V. I. "Poln. Sobr. Soch." [Complete Collected Works], Vol 53, p 249.
4. Ibid., Vol 44, p 425.

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## RESULTS OF ECONOMIC EXPERIMENT EXAMINED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) IN  
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[Article by S. S. Bogomolov, chief of the planning and economics division of  
the Kyshtym Machine-Building Plant imeni M. I. Kalinin (Chelyabinsk Oblast):  
"The Experiment in the Mirror of Reality"]

[Text] The Kyshtym Machine-Building Plant imeni M. I. Kalinin is a part of the Uralgornash Scientific Production Association of the Ministry of Heavy and Transport Machine Building. It is one of the oldest plants in the ministry: recently 230 years had passed since the day it was established. Here they produce machine tools for pneumatic drilling, scraper hoists for underground work, jackhammers and drill bits. Along with other enterprises of the branch the plant is working under the new conditions.

The results of the first year of the plant's operation under the conditions of the economic experiment confirm its effectiveness on the whole. We fulfilled all the technical and economic indicators for 1984: the plan for commodity output--by 101.3 percent; for normative net output--by 102.6 percent; for profit--by 109.8 percent; and for deliveries of products to the consumers in keeping with agreements that were concluded--by 100 percent. The increase in labor productivity amounted to 107.2 percent of the corresponding period of last year. The reduction of expenditures per ruble of commodity output was 1.98 percent while the plan was for 1.3 percent.

In keeping with the provisions of the experiment, as a result of the fulfillment of the plan for product deliveries under agreements, the material incentive fund was increased by 15 percent. This made it possible to increase the bonuses for workers and engineering and technical personnel in those shops which fulfilled the entire plan for the products list. The amount of money deducted into the material incentive fund was 115 percent of the amount in 1983. The fund for the development of production increased significantly (203.7 percent of the 1983 level).

But at the same time the successes could have been more impressive. Here are the unsolved problems which we should like to discuss.

Planning. The conditions of the experiment defined a clear-cut policy for forming the five-year and annual plans for the economic and social development of the enterprises. Moreover, in order to provide for balance of value and physical indicators in the annual plans, the volumes of the production of products in value terms and other value indicators are determined on the basis of assignments of the state plan for producing the most important kinds of products in physical terms and agreements that are concluded for the delivery of products.

In this case the agreement is the basis of everything. But in practice it looks somewhat different. The planning volume indicators for the ministry are compiled, as a rule, on the basis of assignments of the Gosplan for the most important kinds of products and the control figures for the five-year plan. Volume indicators formulated in this way (commodity and sold output, normative net output) are submitted to the all-union industrial associations, production associations and enterprises. Since the control figures of the five-year plan are earmarked considerably earlier than when the annual plan is formed, they cannot objectively take into account all of the real needs of the national economy. Volume indicators created on the basis of the more precise needs for concrete kinds of industrial products, as a rule, differ from those that are sent down from above. This involves deviations of the annual planning value indicators of the enterprise from the calculations according to the products list.

For some enterprises in the plan there is what they call "air," that is, products that do not physically exist, for which neither material nor labor nor financial resources have been allotted. Others have a "reserve," when the calculation of the plan for the products list in value terms gives greater indicators than was planned. As a result, the enterprises turn out to be in far from equal conditions. Great efforts are necessary in order to eliminate such uncoordinated aspects. I think that the annual plans of the industrial ministries should be more closely coordinated with the needs of the national economy for their products. Then the plan of the consumer ministries should be formulated earlier than the plans for the supplier ministries.

In keeping with the "methodological instructions concerning the development of five-year and annual plans for the economic and social development of production associations (enterprises) of the Ministry of Heavy and Transport Machine Building and the evaluation of their economic activity," expenditures per ruble of commodity output are reduced on the basis of the expected expenditures in the base year. Such a policy does not motivate the enterprises to reduce expenditures since the overfulfillment of the plan becomes the basis for reducing them for the following year. The practice of management has shown that the basis should be the planned expenditures of the preceding year.

According to the provisions of the experiment, there is to be an appreciable reduction of the number of technical and economic indicators that are assigned for the enterprises. In practice this has not taken place. Our plant's activity is regulated from above in many areas. Thus in 1984, in addition to planned assignments for the main indicators, the plant received about 40

additional ones. It is decided for us by what percentage the workers must fulfill the norms, how much they must reduce the labor-intensiveness for various items, how many brigades are to be changed over to cost-accounting, how many workers are to be changed over to handling more than one machine tool, and so forth. There are assignments and so this means that there must be reports. And a failure to fulfill any indicator entails if not material losses, at least the dissatisfaction of the higher organizations. The situation is exacerbated by the fact that a plant that is included in a scientific production association must report both to the all-union production association and to the scientific production association....

There is also a lack of coordination in the quarterly breakdown of the annual plan. Quarterly indicators sent down from above frequently are not coordinated with the calculations for the products list or the breakdown for the work days. As a result there may be a great overfulfillment of the plan for one quarter and an underfulfillment for the next. This distorts the true picture of the work of the collective and makes it difficult for it to participate in socialist competition. It sometimes happens that our planned wage fund is reduced because we have not managed to carry out an unrealistically increased plan regarding the normative net output. Here is a typical example. The breakdown of the plant plan for normative net output for the fourth quarter of 1984 was done in such a way that the volume of the normative net output in October was unjustifiably increased by 40,000 rubles. As a result of this the plan was not fulfilled. The planned normative for wages in October is 40.8 kopecks per ruble of normative net output. In keeping with the established policy the planned wage fund is reduced in this case according to a normative calculated in the amount of 35 percent of the established normative. Thus the planned fund was reduced by 5,700 rubles. There is a corresponding reduction of the savings on the wage fund since the beginning of the year. In this case there can arise the need to reduce the additional payments to the wage rates for highly skilled workers and the increments for engineering and technical personnel which are established as a result of economizing on the wage fund through factors that are independent of the plan. If there are no savings on the wage fund, the losses are even greater. It turns out that the increased independence regarding this issue is still only theoretical....

In order to promptly reveal reserves and take measures that provide for fulfillment of the state plan, the enterprise must have the planned assignment for all the basic technical and economic indicators ahead of time. But in practice at the beginning of November we had only the products list plan and the planned volume of commodity output, normative net output and sales. Apparently the time has come to augment the methodological instructions concerning the development of five-year and annual plans with the requirement to notify the enterprises of the annual plan regarding these indicators no later than 2 months before the beginning of the planned year.

Material and technical support for production. The funds for material and technical resources should be transferred to the enterprises early enough so that it is not necessary to make advanced orders for products and so that the schedule orders (plans of assignment) can be issued by the USSR Gosplan so that they will be delivered no later than 2 months before the beginning of the



planned year. The way the plant's plan for 1984 and 1985 was supplied with material resources as of 1 November 1984 is shown in Table 1.

Table 1--Supply of Material Resources for Plan

<u>Names of Resources</u>	<u>According to Norms</u>	<u>Supplies Allotted</u>	<u>Shortage</u>	<u>According to Norms</u>	<u>Supplies Allotted</u>	<u>Shortage</u>
Hot rolled metal, tons	13,904	13,261	643	13,242	11,731	2,511
Electric engines, units	7,782	7,157	625	7,706	6,350	1,356
Bearings, thousands	152	140	12	149	135	14
Magnetic starters	9,648	8,803	845	10,060	4,717	5,343
Metal wares, tons	1,009	540	469	1,011	556	455
Gasoline, tons	459	214	245	498	--	498

It is obviously necessary to concretize the deadlines by which the ministry must issue the funds for material and technical resources and hold it strictly responsible when these are violated. It would be expedient to permit the enterprises to exchange material and technical resources independently within the limits of the funds allotted to them.

Technical reequipment. One of the important aspects of the economic experiment is the motivation of the enterprises to carry out technical reequipment through the fund for the development of production. Moreover this should be conducted, as a rule, through the internal funding method, which is stipulated by the conditions of the experiment. The normatives for the formation of the fund for the development of production were changed for the plant, which made it possible to increase the amount of the calculated wage fund. In 1984 it increased to 203 percent of the amount in 1983.

For more than 25 years the plant has been constructing industrial objects and residential buildings by the internal financing method. In recent years through the forces of the capital construction division (OKS) we have constructed a building for the mechanical assembly shop for scraper hoists, a block of auxiliary shops, a substation, a boiler, a model section, two dormitories and kindergartens. The contractor constructs practically nothing for the plant--the capacities are not available.

But the planning, financing and material support for technical reequipment are not on the proper level. Thus the plan for capital investments for 1984 was not received until June, and this did not allow enough time to prepare for its fulfillment. In recent years the plans for capital investments have not been coordinated with the real sources of financing. In 1984 the "nonreal" sources amounted to 114,000 rubles, and a total of 92,000 rubles' worth of capital investments were not covered by financing. In this situation the OKF was forced to go into debt or take out a loan from the Gosbank.

In general there is no norm for construction by the internal financing method. The unionwide norms are calculated for large construction organizations and

are in no way applicable to the plant's OKS, whose capacity is 500,000 rubles a year. As a result the plant cannot achieve the financing of the construction of industrial facilities. For example, in 1984 we were forced to begin construction using the internal financing method on a building for drilling machines whose estimated cost was about 1.6 million rubles. The Stroybank opens up financing for construction under the condition that no less than 60 percent of the cost of the facility was assimilated in the first year. In 1984 the ministry allotted 200,000 rubles' worth of capital investments upon completion of construction over a period of 3 years, taking into account the capabilities of the OKS. The bank refused to open up financing because of the failure to observe the norm for the stockpile and the normative time periods for construction. The ministry and local planning agencies are allotting funds for construction materials according to the norms for 1 million rubles' worth of construction and installation work, and not according to calculations in keeping with the planning estimates.

As a result, the need for construction is being satisfied by approximately one-third. Moreover, the plant does not have the right to obtain materials from outside on its own initiative, as was previously the case. There is nothing that can justify the reduction of the planned wage fund for the OKS to two-fifths to one-third that of specialized construction organizations. Unless these problems are solved, in our opinion, the development of construction by the internal financing method is impossible, and, consequently, technical recoupmnt of the plant is also impossible.

The development and introduction of new technical equipment. Within the framework of the experiment there is envisioned an acceleration of the development and introduction of new technical equipment which is highly effective and can compete on the world market. At the same time the existing system of planning and incentives does not contribute to this. Scientific research and planning-technological institutes are frequently concerned only about performing their work on time, and the quality and effectiveness of new designs recede into the background.

The plant encountered these problems when forming the plan for new technical equipment for 1985. In 1985-1986 we were to have assimilated the new SBU-125U-52 machine tool which, with respect to many technical and economic parameters, is of significantly poorer quality than the analogue it replaces--the SBU-125 drilling machine. This is apparent from the comparative descriptions of the machine tools (see Table 2). Nonetheless, in keeping with the plan for new technical equipment, the plant was ordered to begin its series production as early as the end of 1985.

The first year of operation under the new conditions of the economic experiment shows that expansion of the rights of the enterprises and an increase in their responsibility for the results of their work is proceeding in a correct direction. This makes it even more important to take into account the experience that has been accumulated in order to perfect the conditions of the experiment.

Table 2--Comparative Characteristics of SBU-125 and SBU-125U-52 Machine Tools

<u>Name of Indicators</u>	<u>SBU-125</u>	<u>SBU-125U-52</u>
Diameter of drilling, mm	125	125-160
Depth of drilling, m	24	52
Mass of machine tool, T	8.5	13.5
Speed of movement, m/sec	0.9	0.84
Hourly productivity, m	7.8	7.5
Annual labor-intensiveness of servicing, hours	546	651
Cost of manufacture, rubles	16,119	45,609
Cost of drilling 1 meter of well, rubles	1.95	2.32
Labor-intensiveness of manufacture, norm-hours	1,847	9,369

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## INTENSIVE PRODUCTION AFFECTS CAPITAL

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[Article by A. M. Volkov, professor, and V. L. Sokolin, economist, Academy of the National Economy Under the USSR Council of Ministers: "Reproduction of Fixed Production Capital and Intensification"]

[Text] The changeover to a primarily intensive type of public production now depends increasingly on the structure, quality and effectiveness of the utilization of fixed production capital. At the beginning of 1985 the amount of this capital reached (in comparable prices) 1.49 trillion rubles. During 1961-1983 the amount of fixed capital increased 6.5-fold and grew much more rapidly than the national income did (3.7-fold).<sup>1</sup> The central problem now is not so much the quantitative growth as the qualitative improvement of the production apparatus. It will be necessary to overcome a tendency toward a reduction in the output-capital ratio which has taken form over the past 2 decades.<sup>2</sup>

### Breaking the Tendency

The reduction of the output-capital ratio became appreciable in the 1970's, especially under the 10th Five-Year Plan (see Table 1). The stable growth rates of public production while the tendency toward reduction of the output-capital ratio remained were possible only as a result of increasing the norm of production accumulation. This is the path of extensive development, which worsens the ratio between expenditures and the final results of production. But is this not tantamount to "compensation" for the shortcomings in planning, organization and management of the investment cycle? Another, more complicated path is stabilization of the output-capital ratio with improvement of the utilization of production capital and capital investments, and also improvement of the structure of production accumulation and its technical level.

Under the 10th Five-Year Plan there was an increase in the proportion of capital investments in regions of Siberia and the Far East. This was brought about by the expansion here of the extraction of energy resources, which required, in turn, additional expenditures on the development of the production infrastructure of the fuel and energy complex (pipeline



transportation, communications, network facilities). In 1976-1980 the proportion of capital investment for branches of the fuel and energy complex in the capital investments for industry as a whole increased from 32 to 38.5 percent as compared to 1971-1975.<sup>3</sup> This growth is continuing under the 11th Five-Year Plan. In 1976-1980 for the fuel and energy complex the output-capital ratio decreased more rapidly than it did in industry as a whole (by 20 and 14 percent, respectively). The level of output-capital ratio in the transportation branches of the production infrastructure is considerably lower than in industry, and this is also reflected in the national economic indicator.

Table 1--Dynamics of Output-Capital Ratio  
(in comparable prices to 1973)

	<u>1975</u>	<u>1980</u>	<u>1983</u>
In national economy			
in % of 1970	86.8	75.1	68.9
in % of 1975	100.0	86.7	79.4
In industry			
in % of 1970	96.4	85.2	76.7
in % of 1975	100.0	88.5	79.7
In construction			
in % of 1970	81.4	61.1	52.2
in % of 1975	100.0	75.0	58.1

Among the other factors that reduce the output-capital ratio one should include the complication of the conditions for extracting minerals, the reduction of the content of useful components in them, and the increase in the average depth of the layers that are being worked. As a result there is an increased proportion of capital investments in restoring capacities that have been withdrawn and maintaining those that are in operation. Additionally, capital expenditures on environmental protection and improvement of working conditions, which are not directly related to the output of products, are also increasing.

The effect of these factors continues even beyond the 11th Five-Year Plan. But their influence on the dynamics of the final results of public production should not be overestimated: it cannot be eliminated but, as analysis shows, it is not decisive in nature. The national economy still has large reserves which will make it possible to accelerate economic growth, increase the effectiveness of capital investments and raise the level of the output-capital ratio.

A key sphere of public production, which largely determines the technical level and the capabilities of the production apparatus, is the investment complex. The decree of the CPSU Central Committee and the USSR Council of Ministers of 29 April 1984, "On Improving Planning, Organization and Management of Capital Construction," is directed toward eliminating the shortcomings in its planning and organization. These largely explain the reduction of the effectiveness both of the capital investments themselves and of the production apparatus that is created from them.

## What Stands in the Way?

The shortcomings in capital construction have taken form over a long period of time and have acquired a certain force of inertia. For a long time we did not manage to reduce the time periods for construction work. Under the 10th Five-Year Plan the majority of enterprises that were put into operation were released in violation of the normative time periods for constructing them. The actual time periods not only are not decreasing, but are even increasing. While in the middle of the 1960's the time period for the construction of facilities for production purposes on the average for the national economy amounted to 7-8 years,<sup>4</sup> now the average duration has reached 10 years.<sup>5</sup>

In addition to the longer time periods for construction work, planning is being prolonged, which also leads to a lengthening of the production cycle and to the obsolescence of planning decisions. The level of the plans frequently does not correspond to modern ideas, and there are mistakes and omissions in the planning estimates. Each year USSR Srobybank institutions revise the estimates for more than 1,500 construction projects. Under the 10th Five-Year Plan the estimated cost of production facilities increased by 33.4 billion rubles, but their capacities did not increase. It has become typical that, in order to complete a construction project, significant additional funds and resources are allotted, and the deadlines for the startup of capacities are postponed. It is typical that the plans are revised mainly for those construction projects which are under construction for a long period of time. Poor planning thus leads to extending the time periods for construction and making it more expensive.

The increase in the estimated cost of enterprises under construction is becoming a chronic shortcoming in the planning and organization of capital construction. The increased cost brings about a change in the program for construction and installation work and deliveries of equipment, which makes it necessary to redistribute financial resources regularly and reduces the effectiveness of their utilization.

One of the central problems in capital construction is still the dispersion of capital investments and the forces of construction organizations among a large number of enterprises and facilities that are being constructed at the same time. According to data of the USSR Central Statistical Administration, it would take about 5 years just to complete the construction projects that have been started. But the ministries and councils of ministers of the union republics continue to submit suggestions to the USSR Gosplan for increasing the number of these. Thus in 1982 it was suggested that we begin construction on three times as many projects as were included in the plan for 1981 (each with an estimated cost of 3 million rubles or more). The Gosplan is constantly working to select the most justified plans that are submitted by the ministries and departments. But it has not managed to reduce the number of construction projects.

Because of the dispersion of capital investments and the lengthy time periods for construction, plans for putting fixed capital into operation are not being fulfilled. According to calculations of the USSR Srobybank, for this reason

the national economy has annually failed to receive 6-6.5 billion rubles' worth of national income. The growth of incomplete construction means that a considerable part of the financial and material resources used for capital construction stays out of economic circulation for a long period of time. In spite of a certain slowing up of the growth of incomplete construction, it still exceeds the established norms.

Accelerated assimilation of newly introduced capacities is still a large reserve for output-capital ratio. Almost one-third of the fixed capital in industry (introduced at least during the past 3 years) is always in the stage of assimilation. Almost two-thirds of all the industrial enterprises that were introduced or reconstructed during the years of the 10th Five-Year Plan were being assimilated or utilized in violation of norms in 1980. Many productions are assimilated extremely late--after 3-5 years. The low level of utilization of new capacities is tantamount to losing industrial products and net income worth billions of rubles. The reasons are known and they can be eliminated--they have to do with the uncoordinated delivery of individual kinds of resources: raw material, equipment, skilled personnel, and also incomplete construction and installation work, defects in the installed equipment, and mistakes in the plans.

Technical reequipment of enterprises makes it possible to increase labor productivity quickly with a limited increase in the number of workers. Practice confirms the effectiveness of this method of reproduction of fixed capital. The output-capital ratio at reconstructed or technologically reequipped enterprises is 1.5 times greater than at new ones. Newly introduced capacities at these enterprises are assimilated in half the time or less as compared to new construction. In 1981-1985 about 114 billion rubles (29.7 percent of the limit on capital investments in industrial construction) were used for technical reequipment and reconstruction in the national economy as against 91 billion (29.4 percent) under the 10th Five-Year Plan. But frequently new construction which lasts for many years is carried out under the guise of reconstruction.

Shortcomings in capital construction constitute one of the reasons for the delay in the introduction of scientific and technical achievements and qualitatively new production technologies, the slow assimilation of capacities that have been introduced or reconstructed, and the lack of coordination of the output of various kinds of products which, in turn, brings about a shortage of fuel and energy resources and raw and processed materials.

A certain increase in the rates of economic growth in 1983 was accompanied by qualitative changes in construction. Labor productivity here increased by 3.1 percent as compared to 2.3 percent which was the average during 1981-1982. The startup of fixed capital and the introduction of capital investments increased by 5 percent, and as a result there was a certain reduction in the proportion of above-normative incomplete construction. Now it is important to reinforce these positive changes and to take energetic measures to reduce the time periods for construction and accelerate the technical reequipment of the national economy.

The decree of the CPSU Central Committee and the USSR Council of Ministers concerning improving affairs in capital construction earmarked a system of measures for eliminating shortcomings in planning and management of the branch. It would seem that a unified system of planning which embraces the stages of planning, construction (new and reconstruction) and the introduction and assimilation of planned capacities would contribute to the successful implementation of these measures. It is necessary to achieve a unity of actions of the participants in the investment cycle at all levels of management (Gosplan, clients, planning and construction organizations). Their activity should be organized in such a way that it is clear who is finally responsible for the economic substantiation of the decisions and for management wonders. It is necessary to improve the system of preventive supervision and to strengthen the personal responsibility for the time periods and quality of the fulfillment of planned assignments as well as the smoothness of their actions. Increasing the effectiveness of capital investments is also directly related to the intensification of construction itself and the production of construction equipment and materials.

Another reserve for intensification of public production is increasing the effectiveness of existing fixed production capital. Here we are speaking only about certain aspects of a multifaceted problem.

#### Replacement and Renewal of Technical Equipment

Domestic machine building has large achievements in the development of modern machines and technologies, which frequently surpass the best foreign models. In record periods of time we have created a turbine for the Siberia-Western Europe gas line. High ratings have been given to many models of metal-cutting machine tools, new turbines and generators, and so forth. At the same time there are many examples in which the new, highly effective technologies created in our country were first assimilated abroad.

Qualitative improvement of the fleet of machines and equipment--prompt renewal and the introduction of the achievements of science and technology--will make it possible to increase the effectiveness of fixed capital. But the limitedness of capital investments and the incomplete satisfaction of the investment demand for new machines and equipment lead to a situation where the proportion of obsolete and worn-out technical equipment is not decreasing, and for certain kinds it is even increasing. Thus in the machine fleet for agriculture by the beginning of 1982 approximately 44 percent of the tractors were not very productive. This was largely brought about by the existing policy for the distribution and utilization of amortization deductions for renovation.

In economic literature the renewal of fixed production capital is made dependent primarily on increased norms for amortization deductions and an increase of their proportion in the deductions for renovation. It would seem that the main thing is the coordination of the renovation fund with the material supply in terms of amount and structure. For increasing the norms for amortization deductions in and of itself does not accelerate the updating of technical equipment, but only creates the financial prerequisites for this. During 1966-1983 amortization deductions in the national economy increased



4.8-fold with an average annual rate of increase of 9.2 percent (see Table 2). Deductions for renovation increased 5.6-fold (the average rate--10 percent).

Table 2--Dynamics of Amortization Deductions for Renovation in the National Economy (including kolkhozes) 1965-1983

	Total, billions of rubles				Average annual growth rates, %		
	1965	1970	1975	1983	1966-1970	1971-1975	1976-1983
Amortization deductions for renovation, total	10.5	16.2	31.9	58.7	9.1	14.5	7.9
Including:							
Industry	5.2	8.0	16.1	30.0	8.8	15.1	8.1
Agriculture	2.4	3.5	6.5	11.3	9.4	12.5	7.2
Transportation and communications	1.4	2.2	4.2	8.3	9.8	13.7	8.9

The remarkable growth of amortization deductions for renovation during 1971-1975 is explained by the fact that beginning in 1975 amortization was calculated according to new norms with respect to the restoration value of fixed capital after the revaluation. Their restoration values according to the results of the revaluation of cost-accounting enterprises and organizations as of 1 January 1972 exceeded the initial value by 11 percent. These two factors also conditioned the growth of amortization by 1975. A comparison of the growth rates of amortization for renovation and the growth rates of fixed production capital shows that in the latter period the renovation fund expanded more rapidly than fixed capital did (see Table 3).

Table 3

	Growth Rate, %					
	Amortization for renovation			Fixed production capital		
	1966-1970	1971-1974	1976-1983	1966-1970	1971-1974	1976-1983
In the sphere of material production, total	154	147	184	148	140	174
Including:						
Industry	153	145	186	152	139	176
Agriculture	146	155	174	137	145	175
Transportation and communications	160	142	198	141	136	167

Thus one can see the financial resources which make it possible to accelerate the replacement of outdated technical equipment. But the growth of production capacities up to this point has taken place mainly as a result of expansion of the fleet of equipment. This, in turn, is manifested in a reduction of the coefficients of the elimination of fixed capital both in material production as a whole and in individual branches of it (see Table 4).

Table 4--Coefficients of Liquidation of Fixed Capital,  
Average for Period, %

	1966- 1970	1971- 1975	1976- 1980	1983
Fixed production capital, total	2.6	2.3	2.3	2.0
Including:				
Industry	2.2	1.9	1.4	1.3
Construction	6.3	5.3	4.7	4.9

While in industry as a whole the coefficient of liquidation during 1976-1983 amounted to 1.3 percent, for machines and equipment it was 2.3 percent. It remained practically the same, that is, the replacement of machines and equipment did not accelerate. The average normative service life of machines and equipment in industry is about 13 years (according the norm for amortization for complete restoration). According to calculations, the mass of liquidated equipment in 1982 amounted to approximately 60 percent of the equipment in industry that has been put into operation in 1969. Consequently, about 40 percent of the equipment that had put into operation in 1969 and was to have been replaced in 1982 was not updated.

According to calculations of the authors, the coefficient of liquidation of machines and equipment necessary for maintaining the technical level of fixed capital exceeds 4 percent; it should be increased to 6-8 percent as is suggested by certain economists.<sup>6</sup> To do this it is necessary to utilize more fully amortization, whose economic purpose is to satisfy the needs for renewal. Now the money in the amortization fund is dispersed and most of it is deprived of a special purpose and is used as a source of financing capital investments. Does this not impede the prompt updating of capital?

One of the consequences of the aging of equipment is increased proportional expenditures on capital repair; in 1975 they amounted to 2.70 kopecks, and in 1980--2.74 kopecks per ruble of average annual fixed capital in industry. The increase in expenditures was brought about largely by the need to keep the fleet of worn-out machines in working condition. It is permitted to use some of the amortization deductions intended for capital repair for the acquisition of new equipment if the repair becomes economically inexpedient. But in 1980 only 3.5 percent of the amortization deductions were used for these purposes. In industry expenditures on capital repair of machines and equipment exceeds 1.7-fold their liquidation (in monetary terms) from obsolescence and wear and tear.

In other words, the slow updating of fixed production capital in industry and other sectors of the national economy is brought about by two basic factors. First, the change in the norms for amortization and the more rapid growth of the renovation fund practically do not accelerate the replacement of outdated and worn-out equipment. Second, the poor balance coordination of financing of capital investments with the quantity and structure of technical equipment that is used for replacement violates the connection between the normative service life of equipment and the time period for its replacement. Planned

balances of equipment envision first of all the satisfaction of the needs for new construction and export, which because of the limitedness of production capacities in machine building gives rise to a shortage of machines and equipment for updating. The consequence of this shortage is that the economic mechanism does not have a very appreciable influence on the acceleration of replacement. So far there are weak economic stimuli which would contribute to the dissemination of scientific and technical innovations and the crowding out of old technical equipment and less effective technologies that are related to them by highly productive machines and equipment and principally new implements of labor.

The shortcomings in the investment complex and capital construction have a negative effect on the work of other spheres of the economy, lead to an overexpenditure of financial resources and reduce the effectiveness of their utilization. Overcoming these presupposes first and foremost efficient utilization of the production and scientific-technical potential. It is necessary to improve the planning of capital construction as a unified comprehensive system, beginning with planning work and ending with the assimilation of the production capacities. It is necessary to achieve a balance between capital investments and the plans for contracting work, the production capacities of the construction organizations and their labor and material resources. There must be planning discipline and responsibility of the participants in the investment cycle for the promptness of the performance of the work and its quality.

The planning of capital construction requires efficient coordination of the time periods for construction with the limits of capital investments and with the number of facilities that are being constructed at the same time. Since under the 11th Five-Year Plan the aging and the increased service life of production equipment and machines are continuing, one should envision more effective measures for reducing the proportion of technical equipment that has served out its time. There would be some point in increasing the proportion of capital investments used for making up for the withdrawal of fixed production capital.

During the course of the drawing up of the 12th Five-Year Plan it would be expedient to shift the center of gravity from the planning of capital investments to the planning of the reproduction of fixed production capital and its technological structure. Such an approach reflects more precisely the final national economic results and provides for unity of plans for production and new construction.

#### FOOTNOTES

1. "SSSR v Tsifrikh v 1984 G." [The USSR in Figures in 1984], Moscow, "Finansy i Statistika", 1985, pp 44, 54.
2. For the national economy the output-capital ratio is calculated as the relationship between the produced national income and the average annual fixed production capital, for industry--conventional net (or commodity) output.

3. PLANOVOYE KHOZYAYSTVO, No 12, 1983, p 32.
4. Ivanov, Ye. A., "Vosproizvodstvo i ispolzovaniye osnovnykh fondov" [Reproduction and Utilization of Fixed Capital], Moscow, "Ekonomika", 1985, p 80.
5. Krasovskiy, V. P., "Rezervy povysheniya effektivnosti investitsionnogo kompleksa" [Reserve for Increasing the Effectiveness of the Investment Complex], Moscow, "Ekonomika", 1984, p 115.
6. PRAVDA, 14 July 1984.

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## SYNTHETIC FUEL PROMISES FUTURE ENERGY SOURCE

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EES) (in Russian No 8, Aug 85 pp 124-130)

[Article by I. V. Kalechits and G. S. Aslanyan, Institute of High Temperatures of the USSR Academy of Sciences (Moscow): "Synthetic Liquid Fuel From Coal: Views to the Future"]

[Text] The 12th Congress of the World Energy Conference estimated the annual consumption of energy by 1990 at 8.3-8.9 billion tons of petroleum equivalent, and by the end of the century--10.9-11.3 billion tons. According to the prediction, the consumption of petroleum will reach 3.1-3.4 and 3.5-4.0 billion tons, respectively. And the reliable supplies of petroleum in the world which are suitable for extraction was estimated at 71.4 billion tons at the beginning of 1983. Consequently one can assume that with the existing dynamics of the consumption, petroleum supplies will be exhausted in a few decades.

Therefore the next 10-15 years will be a stage of restructuring of the fuel and energy balances of the developed countries. Restructuring against a background of an energy-saving policy will mean the crowding out of petroleum in places where this is possible by natural gas and coal, the development of atomic energy, the expansion of the production of energy from renewable sources, and so forth. Such changes are already taking place: in France, for example, the capacities of AES's in 1981 reached 29.5 percent of the established capacity of all electrical power stations; in the world plans are being carried out for wave and tide electric power stations, wind energy installations are being created, and so forth.

But liquid hydrocarbons can be replaced by other energy bearers far from everywhere. It is necessary, additionally, to keep in mind that petroleum and the liquid hydrocarbons extracted from it are an irreplaceable raw material for the organic chemistry industry, for instance, the production of polymers. Moreover the needs of chemistry for organic raw materials are increasing even more rapidly than the consumption of energy: by the end of the century it is expected that 20-25 percent of the petroleum that is extracted will be used for these purposes, which is comparable to the consumption of petroleum products by automotive transportation.

This is why even in the foreseeable future we will not be able to do without industrial production of petroleum substitutes--synthetic liquid fuels (SZhT) from coal.

#### From the History of the Problem

Even at the end of the 19th century the first patents were obtained for the production of synthetic liquid fuels which, incidentally, were not used for anything. One can consider the beginning of regular research work to be the patents of von Bergius and the research in the I. G. Farbenindustrie Laboratories in 1913-1922. During the 1920's and 1930's the problem evoked interest in the European countries. By that time Germany, Britain and the USSR had developed experimental installations, and during the prewar and war years Germany operated two dozen plants with a nominal capacity of about 6 million tons a year and a maximum output of about 4 million tons (1943).<sup>1</sup>

These enterprises stopped operating immediately after the war. The scale of experimental work was reduced in other countries as well. The reason was simple: the recently discovered deposits of the Near East began to deliver inexpensive petroleum. The drop in the cost of petroleum, skillfully supported by political and economic maneuvers of the multinational monopolies, brought about the one-sidedness of the fuel and energy balances of the European capitalist countries during the 1950's and 1960's; they were limited to superficial processing of imported petroleum, and fuel oil gradually crowded out coal, whose extraction steadily decreased.

The rapid increase in the prices for petroleum and the fuel and energy crisis which broke out in capitalist countries in the middle of the 1970's brought back the problem of synthetic fuels. It was remembered and...the development began from zero. Why not return to the technology of I. G. Farbenindustrie? The fact is that the old German plants were extremely complicated and not very powerful. The largest of them produced 500,000-600,000 tons a year: in other words, in order to satisfy the current demand of the FRG for petroleum products it would be necessary to have 300 of these plants.

The complicated nature of the technology for obtaining liquid fuels from coal is determined by the profound differences in the initial raw materials (petroleum and coal) and in their chemical nature.

#### Modern Technologies for Producing SZhT

We now know of more than two dozen technological processes for liquefying coal, from laboratory to experimental ones, with capacities of 600 tons of processed coal per day. New technological solutions are used in many of them. This pertains first and foremost to the number of stages in processing: from the four stages in the process of I. G. Farbenindustrie it has been reduced to 1-2 with the output of synthetic petroleum or boiler fuel and to 2-3 with the output of commercial motor fuels.

The progressive changes become possible because of the essential acceleration of processes of fission of the organic substance of coal and its assimilation of hydrogen. In addition to venting the active catalysts in individual

processes developed both in our country and abroad, small quantities of organic substances are also added to the mixture. They initiate the breakdown of the organic mass of coal or they impede the undesirable reactions of condensation and carbonization of the initial decomposition products.

Certain successes have been achieved in the intensification of such processes as removing the ash, dividing up the products of combustion and salvaging the solid residuals. Insufficiently effective filtering when removing the solid components was replaced in a number of processes by hydrocyclones (so-called antisolvents are used to combine the precipitated solid particles) and also vacuum rectification with subsequent gasification of the vacuum residual which contains all solid and high molecular substances. Essential progress has also been achieved in the creation of technological equipment; thus they are operating large reactors with a volume of 123 cubic meters (as compared to 8 cubic meters in the traditional process).

But still it must be admitted that the improvements in the technological processes are still partial, and on the whole modern technology is still largely similar to the traditional method of I. G. Farbenindustrie. Just as before the equipment is complicated and expensive, which predetermines high capital expenditures. Expensive high-pressure equipment made of alloy steels is used in effectively because of the slow speeds of the transformation of the raw material--the coal. The increased productivity of the installations has not yet produced a radical change in the technical and economic indicators. Thus the replacement of petroleum with synthetic fuel, for example, in the FRG with the current level of consumption, would mean the construction not of 300 plants, as with the technology of I. G. Farbenindustrie, but 70-75.

This is part of the change in the situation at the beginning of the 1980's in the world petroleum market--with a satisfaction of the demand and a certain reduction in prices--lead to a market reorientation of capitalist countries with respect to the production of SZhT. The reduction of allocations for these purposes in the United States is indicative--millions of dollars:

	<u>1981</u>	<u>1982</u>	<u>1983</u>
Research work on coal liquefaction	185.1	98.8	26.2
The same, for coal gasification	70.1	53.1	10.5
The same, for underground gasification	10.0	8.2	0.7
Future research	52.0	52.4	17.0
Construction of installation for liquefaction of coal	327.5	--	--

In addition to the sharp reduction of allocations for scientific developments and the curtailment of construction of the installations, the costly experiments were deprived of state subsidies and the firms doing the development were entirely responsible for completing them.

#### Variants Are Possible

Processes of indirect liquefaction of coal, which begin with its gasification, can serve as alternatives to direct liquification of coal. The gas synthesis

that is obtained is transformed either into methanol, which is regarded as a substitute for gasoline or a component of it, or into a mixture of liquid hydrocarbons (the Fisher-Tropsch synthesis), or, finally, into methanol--a substitute for natural gas. The main argument in favor of indirect liquefaction of coal is the circumstance that the processes of gasification, the Fisher-Tropsch synthesis, the synthesis of methanol, and the methanization of the gas synthesis have been tested in industry and the process of dehydration of methanol (the so-called Mobil process which has been developed in a number of firms and research institutions (including in our country)) opens up the possibility of changing over immediately to high-octane M-benzene.

But indirect liquefaction of coal, a multistage process is compared to direct liquefaction, in many cases turns out to be less effective because of the relatively low heat efficiency factor and the high proportional capital investments. An analysis has shown a considerable range of values of the heat efficiency factor of these processes because of differences in the raw material, the degree of salvaging of heat, the inclusion of various byproducts in the final products, the varying quality of technical equipment and, finally, the differences in the methods for evaluating the efficiency factor.

With the simultaneous production of the natural gas substitute (ZPG) in the processes of direct liquefaction, the efficiency factor increases essentially, and with the synthesis of methanol and M-benzene it even exceeds the efficiency factor of hydrogenization. Therefore such combined processes are of interest because of the shortage of natural gas; gas compressed to 200 MP can be used as motor fuel.

#### Profitability of New Technologies

In the literature one encounters differing estimates of another characteristic of the processes that are being developed--the proportional capital investments. The differences are explained by the market considerations of the developers, and also objective factors: the unequal conditions for construction, differences in the total annual productivity, changes in prices, the inclusion or the lack of inclusion in the total capital expenditures the prices of land, investments in the infrastructure and in purification installations, and so forth.

Unfortunately, in known publications there is no sufficiently detailed structure of capital investments which would make it possible to reduce the estimates of proportional capital investments to a single level. Therefore we shall discuss two sources.<sup>3</sup> It seems that the estimates presented there of proportional capital expenditures are sufficiently representative and are fairly well-coordinated (Table 1).

Although in the majority of works mention is made of the high expenditures on obtaining SZhT by the Fisher-Tropsch (FT) method, it would be wrong to deny the expediency of this production. The lion's share of expenditures in the FT process are conditioned by that part of it where crude liquid products of synthesis are processed (alkalinization, polymerization and hydrocracking). Therefore if in the region the production capacities for processing petroleum



are underloaded, performing the initial stages of the FT process (gasification, synthesis) at existing petroleum processing plants appreciably increases its effectiveness. The FT process also turns out to be preferable if there is a need precisely for the intermediate distillates, say, changing automotive transportation over to diesel fuel.

Table 1--Proportional Capital Expenditures on Production of SZhT, dollars per ton of conventional fuel per year

Process	According to Data From Sources	
	(1)	(2)
Hydrogenization	595	--
Synthesis of methanol	776	774
Synthesis of M-benzine	911	934
Fisher-Tropsh synthesis	1,113	1,158

The developments of processes of obtaining synthetic fuels in our country, which are coordinated by a special comprehensive target program, are oriented primarily toward the utilization of inexpensive Kansk-Achinsk coal, and also toward simplifying the technology and making it less expensive. The program also envisions work on alternative methods--the high-speed pyrolysis of coals and processing of the resins that the resin that is obtained, gasification of the hydrocarbons that are obtained from the synthesis gas with the utilization of principally new catalysts. Theoretical fundamentals of liquefying coal are being studied--the mechanism and the kinetics of this complicated process. Research has not yet made its way through the technological development, but with respect to Kansk-Achinsk coal there are large reserves of productivity in reagents, and, consequently, there are reserves for reducing the capital-intensiveness. Even now from preplanning calculations one can judge the future production cost of synthetic fuel from the unique raw material of Kansk-Achinsk coals. According to calculations, capital expenditures on the creation of a plant with a capacity of 3.7 million tons of SZhT a year will be 1.4 billion rubles. This does not include expenditures on the extraction of the raw material, the construction and machine construction base or the infrastructure (Table 2). In the price calculations for Kansk-Achinsk coals they used 10 rubles per ton of conventional fuel.

Table 2--Expenditures on Obtaining SZhT From Kansk-Achinsk Coal

	Proportional Capital Investments, rubles/ton per year	Added Expenditures, rubles per ton
Hydrogenization	350-530	115-160
Synthesis of methanol	210-310	65-90
Synthesis of M-benzine	535-800	165-230
Fisher-Tropsh synthesis	660-1000	200-280

A more precise estimate of expenditures is possible only with industrial realization of the plan. One can hope, however, that the industrial indicators will turn out to be close to the values indicated. From a

comparison of the estimated expenditures for SZhT and the economic indicators of production of motor fuels made of petroleum from adjacent deposits one can see that even in the 1990s in our country the situation will be favorable for effective replacement of petroleum with engine fuels made from coal on the basis of processes of hydrogenization, even with the current level of technical developments. By the end of the century the process of indirect liquefaction of coal will also obviously be applied in industry.

#### FOOTNOTES

1. Falba, Yu. "Khimicheskiye veshchestva iz uglya" [Chemical Substances From Coal], Moscow, "Khimiya", 1980.
2. During 1970-1982 the world prices for petroleum increased 19-fold (or 6-fold taking inflation into account), MEMO, No 1, 1984, p 55.
3. Eisenlohr, K. H. and Gaensslen, H., "Fuel-Processing Technology," 4 (1981), pp 43-61 (1); Andrew, S. R., CHEM. ENG., No 345 (1979), pp 414-416 (2).

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## WAYS OF IMPROVING PRODUCTION MANAGEMENT RELATED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 8, Aug 85 pp 131-141

[Article by V. M. Katkov, candidate of technical sciences, Scientific Research Institute of Applied Geodesy (Novosibirsk): "Production Management: Active Methods of Improvement"]

[Text] There are thousands of automated control systems in operation in the country, but many ASU's that have been accepted by commissions and meet all the requirements of the technological assignment do not play the proper role. Their actual effect rarely reaches the calculated one, and at many enterprises it is only one-fourth or one-fifth of the intended amount. The same thing is observed with the introduction of organizational plans or measures for scientific organization of labor.

How are we now approaching the improvement of management and organization of production? The statement of the problem, the development of the plan (usually with the participation of scientific research and planning organizations) and its introduction.... This path corresponds to the needs of production when its structure is relatively simple and stable. The sharply increasing complexity and dynamism of production, the deepening of specialization and cooperation and the changeover to intensive forms of development have made the customary forms of improving management inadequate.

### Traditional Methods

Under real conditions the production process is constantly changing, and this is reflected in the goals, functions, organizational structure, official duties and technology of management. From 1.5 to 3 and more years pass from the time of the investigation until the introduction of the plan. By the time of its assimilation the plan has become largely outdated. Moreover, it must be changed and adjusted during the course of operation. To do this the management personnel of the enterprise need skills comparable to those of the developers, which is not the case under existing conditions.

The plan includes only the potential for improving management. Only when the plan is accepted and carried out by the personnel is it transformed into a real organizational force. Yet the volume of technical documentation for

plants is so great that it is very difficult to take it all in. The organizational plan for a large enterprises amounts to 150-170 volumes. The number of plans for ASU's is somewhat less. But this is only half the problem. It is much worse that the plans are not oriented toward specific people to carry them out, and therefore most frequently they cannot serve as working documentation for management personnel of the enterprise where they are being introduced.

The plans do not take into account how each method and each management technology is broken down in the consciousness of the specific person performing the work, and it is not mandatory that they be carried out, as distinct, for example, from the standards for the enterprise. Therefore serious psychological barriers arise on the path to the introduction of the plans, and many of them end their lives on the shelves.

Improvement of management through the development and introduction of plans requires a good deal of time, labor and money. Plans for ASU's are developed in several sequences and cost from 300,000 to 1.5-2 million rubles. They can be drawn up only by large scientific research and planning institutes and for large enterprises. It would be a mistake, of course, to refrain altogether from the experience and capabilities of scientific research and planning organizations. But there should be intensive development of a more flexible approach and a search for new forms and methods.

#### A New Approach

It is possible to formulate the new initial requirements for improving management in the following way:

an active constituent part of the system of management is man. Only through him is it possible to improve management, and therefore it is necessary to influence first and foremost management personnel;

everything which in one way or another determines the processes of management and organization and is documented in the comprehensive system of management of the association (KSUO);

the development of the KSUO and the improvement of the system of management take place in close cooperation between specialists of the association and scientific research and planning organizations;

improvement of management is recognized as the strategic wine, one of the most important tasks of the general directors, and it requires the participation of the entire management staff.

#### New Interrelations

In order to satisfy these requirements it is necessary first of all to change the nature of the interactions between scientific research and planning organizations and the enterprises. It seems that the institute should not draw up the plan in the ordinary understanding of this word. Instead of it, a comprehensive system from management of the association is created or improved



at the enterprise. It embraces all aspects of the activity of the enterprise and is regarded as the working management documentation (especially when it is drawn up in the form of standards for the enterprise which must be met). The KSD is developed by specialists of the association in conjunction with scientific research and planning organizations. The planning organizations determine the overall requirements, principles and methods of functioning of the system, the standard management procedures, the methodological recommendations, the program software for automated processes of information supply and the control procedures. Specialists of the association develop provisions concerning subdivisions, official instructions and individual procedures, and they participate in the formulation of management and planning tasks when they are automated.

This approach to improving management is comprehensive in nature, it makes it possible to reveal the maximum reserves, and it takes into account the sociopsychological peculiarities of the one who is carrying it out.

### First Stage

Now the tasks of scientific research and planning institutions no longer consist merely of suggesting progressive new principles and methods of management and efficient organizational structures. It is necessary to go further and provide reliable and effective information support for managers of all levels, to train management personnel and to teach them to utilize the new methods.

The new methods are first discussed with the general directors. At this time the management policy is formed. The system of management and its structure should to some degree be arranged to suit the managers and their ideas about the functioning and development of the enterprise. The process of joint discussion forms an overall style of management in the association and determines the range of management methods that are applied, the significance and position of each of them, and the sphere of their effect, directing the entire complex toward particular goals which are set by the management.

We shall give examples of a modern approach to management. It is expedient to assign each worker of the association not one, but three functions: production, information and control. This makes it possible to create a closed system of management with feedback. In this case the completion of the work is considered to be, say, not the time of the manufacture of the part, but the time when the information about it comes in to the corresponding management unit.

Up to this point in many associations there has been a system of initiative control, in which mainly management personnel participate. The control is exercised episodically, it includes only a small part of the work, and to a significant degree it is subjective in nature. The modern approach requires exercising control as the work is done, which is possible only with the participation of all workers. During the process of submitting the work the responsibility shifts from the performer to the receiver. Let us say that the deadlines for carrying out an assignment in the head technologist's division are not met because of the fact that they accepted incomplete documentation

from the planning division. Nonetheless the technological institute must feel responsibility since it has not mastered the method of working with technology, the technical documentation.

Each method suggested by the planning organization is carefully considered and expedient forms of its implementation and the limits of its application are discussed. The managers accept far from all methods and forms of management that are suggested, and they evaluate their significance in various ways. This is natural. When introducing new methods one frequently has to overcome inertia and psychological barriers: for it is necessary to rearrange things and refrain from what is customary and established and move on to what is new. Thus, for example, when introducing new management methods at one of the production associations the upper-level managers applied the following devices: they did not make decisions regarding those issues which could be resolved at lower-management levels; they monitor the quality of the decisions that were made, and not simply the fact that they were made; they correct certain partial mistakes within the framework of the competence of the managers, thus encouraging their independence and initiative.

The development of the management policy helps to determine the requirements for the organizational structure. This includes the realization of modern progressive principles and methods of management, the separation, where possible, of long-range and immediate jobs and production and service functions, the centralization of auxiliary work, the regularization and automation of information support, specialization and simplification of management work, uniform loading of management personnel and dynamics of the structure and the possibility of improving it.

After the development of methodological materials these begin the process of training in the new methods. The general director of the institute of the association, with its participation, train the managers of the divisions, heads and head specialists. They, in turn, train the managers of branches and laboratories, foremen, and brigade leaders, and the latter train the people who actually do the work. Gradually the training process encompasses the entire management staff. It is preferable to have training conducted by plant specialists. In this case the workers of the institute only consult, helping to find answers to difficult questions. Regardless of how good one method of management or another may be, if it is not "felt through" and received by the managers, it will not be realized.

#### The Development of the KSUO--An Active Form of Training

At some point in parallel with the first stage and as the lower levels are drawn into the work there begins the development of the documentation of the comprehensive system for management of the association. The KSUO consists of a number of systems, for example, control of the production process, the development and assimilation of new items, technical and information support, the social development of the collective, and so forth. It is important for the system to embrace all aspects of management and to remain open, that is, to allow development and augmentation.

The comprehensive systems for management includes organizational and structural schemes, methodological and management materials, a description of management procedures, information models, various classifiers and reference works, provisions concerning subdivisions, official instructions and program and other documentation. Their development is carried out at various hierarchical levels.

The general directors are made responsible for the development of the basic principles and methods of management, the overall organizational structure of the association, and the formation of the technical, economic and personnel policies. The higher management are thus assigned strategic functions: prognostication, the prospects for development and improvement of the management system.

The functional divisions develop individual systems. For example, the planning-economic and dispatcher-production divisions--the system of management of the production process; the divisions for design and preparation of production--the system of development and assimilation of new items; the ASU division--information support, and so forth.

Each structural subdivision--division, shop, bureau, laboratory--develops provisions concerning its own subdivisions and official instructions in keeping with the methodological recommendations that have been developed by the institute by this time. The significance of these provisions is increasing: they not only legally determine the duties, rights and responsibility but also play an important role in planning stable work of subdivisions and evaluating their activity, and they are also used for training specialists.

During the course of the development of documentation the managers will look for ways of applying advanced methods of management in their subdivisions, study "their own" functions, and determine the rights necessary for their realization, the methods for checking on the performance of functions, the forms of interaction with other subdivisions, document circulation and information ties.

The stage of development of provisions, instructions, organizational and informational systems, principles of automation of individual procedures, the introduction of standard planning decisions and packages of applied programs--this is all an active form of training. It is used only for developing the documentation of the KSUO, but also for testing and evaluating the workers themselves, their knowledge of the theory and practice of management, their activity, their skills, and their attitudes towards questions of prospects of development of the enterprises and toward the new.

In this stage specialists of the institute render methodological assistance in the form of consultations, they transfer and help to adapt standard planning decisions and packages of applied programs, they coordinate and monitor all documentation that is developed within the framework of the KSUO, and they analyze the forms of realization of the methods of management that are proposed by specialists of the enterprise, their coordination and their interaction, thus providing for continuity and logical consistency in the

procedures and algorithms of management. The organizational planning of the management system in connection with the creation of the ASU's is used widely by the scientific research and planning institute of automated control systems (NIPI ASU) of the NPO "system" of the Ministry of Tractor and Agricultural Machine Building, the NPO "Lenelektronmash" of the Ministry of Instrument-Making Control Systems and Automation Equipment and other institutes of the country.

#### The ASU With Active Methods

Traditionally automation of management does not set the goal of changing the organizational structure and the established methods. But an ASU which does not effect the essence and principles of management encompasses only individual processes, thus giving rise to disproportions and bottlenecks. This complicates the introduction, generates psychological barriers and reduces effectiveness.

Under the conditions of active technology for improvement of management, the development of the ASU is preceded by the introduction of a progressive structure and modern methods. This raises the quality of management to the level where it is expedient to introduce the ASU. The experience of leading enterprises shows that computer equipment should be coordinated into a unified system with the organizational structure, management processes, information, methods and personnel. Examples are the ZAZ, the LOMO and other enterprises of the country.

Not only specialists of the ASU division, but also all managers engage in the automation processes of management. The general directors with the participation of scientific research and planning institutes determine the overall methodology for the development and introduction of the ASU. The functional divisions develop and introduce the corresponding subsystems and tasks. The ASU division improves the processes of information support and develops and operates program support and technical equipment. Automation is becoming an instrument for improving management and not just an episodic stage in the introduction of a plan.

When developing the ASU it is important to determine the list of automated tasks and to construct information models and the document circulation for the enterprise. As a rule, the quality of the performance of this work remains low because of the high labor-intensiveness and the large scale of the research which is required in order to solve these problems. In order to get around these problems, the developer of the ASU usually suggests his own list of tasks from which the client can select the most interesting, and the document circulation is determined only for them. Document circulation and information flows of the entire system for managing the association, their regularization and their improvement remain outside the field of vision of the developers and the ASU division.

With the new approach the provisions concerning the subdivisions serve as initial material for constructing the tree of goals, the matrix of functions, the information models and the document circulation. And that which is usually achieved with great difficulty when developing plans for the ASU is



generated naturally during the process of developing and constructing the ASU with the new approach.

Under the conditions of the active forms of improvement, all subdivisions participate in the development of the ASU, and the ASU division moves into a functional category and becomes responsible for the quality of the information support and the document circulation of the entire system of management of the association. In the process of improving information support other paths are taken besides automation: Information science methods, redistribution of the volumes of information work among the levels of management, grouping and differentiation of information, and unification and standardization of both forms and the content of documents. The application of the principle of management according to deviations where the permanent bearer of information is the plan and the operational information is composed of deviations from it made it possible for specialists of the Scientific-Research Institute of the USSR Central Statistical Administration in the branch system of operational reporting to reduce the volume of information that is transmitted 16.6 times while retaining the level of information availability for management. The cost of transferring data concerning deviations was approximately 7-8 percent of the cost of transferring daily reports.

For better satisfaction of the information needs of managers, it is necessary to introduce management information systems (MIS) more extensively.

Under the conditions of active methods of improving management, the ASU exists not next to or in parallel with the traditional system, but grows out of it.

The approach presented here to the improvement of production management is an attempt to generalize the experience in creating comprehensive systems for managing associations and introducing ASU's on the basis of organizational plans in our country. Individual aspects of it have been developed during the course of many years of work at one of the production associations, in which the author took part.

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## PLANT ORGANIZER ASPIRATIONS DISCLOSED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 8, Aug 85 pp 141-150

[Article by F. I. Semyashkin, doctor of economic sciences, department chief of the Ural Polytechnic Institute, and I. G. Lyakhov, candidate of economic sciences, chief of the Division for Scientific Organization of Labor and Management of the Uralmash Production Association (Sverdlovsk): "What Does the Plant Organizer Dream Of?"

[Text] Today there is no doubt about the high effectiveness of measures for improving the organization of labor, production and management. An analysis of the effectiveness of comprehensive plans for development in two large production associations (Uralkhimmash of the Ministry of Chemical Machine Building and Sverdlovenerge of the USSR Ministry of Power and Electrification) showed that in order to increase labor productivity by 1 percent it is necessary to expend: for the expansion of production, reconstruction and assimilation of new capacities--4,912 rubles, for the improvement of the technical base of production--2,587 rubles, and for improvement of organization of labor, production and management--196 rubles. The time period for recouping these expenditures in the first group of measures was 12 years, in the second group--4 years and in the third group--less than a year.

There are many examples of successful utilization of organizational factors in the development of enterprises and associations. Managers recognize that it is necessary to devote more attention to organizational factors in the growth of production.

Students in the department of organizers of industrial production and construction at the Ural Polytechnical Institute think that success in the work of the manager now depends by 70 percent on the ability to handle current duties efficiently and by 30 percent on the ability to solve problems related to the development of production, but within 5-10 years, in their opinion, the situation will change: the influence of current problems will drop to 47 percent, and that of long-range problems will increase to 53 percent.

There is no doubt about the high effectiveness of organizational measures and there are examples of skillful utilization of reserves, but one cannot say that in industry as a whole the picture looks good. One of the main reasons

for this situation is the shortcomings in the organization of the processes of solving complicated problems.

The development of brigade organization and stimulation of labor, the formation of comprehensive systems for controlling the effectiveness of production, the improvement of organizational structures and so forth--all these are the same kinds of objects of control as any other production processes. But this fact is not yet sufficiently recognized, or in any case practical conclusions have not been drawn from it.

To go I know not where; to bring I know not what....

The assignment to solve one organizational problem or another is set for the association in the five-year or annual plan or else in the form of an individual order. If in the former case the enterprise is sometimes given time for preliminary development of the problem, the determination of the volumes and possible time periods for planning and introduction, the issuance of an order frequently catches people unawares. Sometimes it indicates deliberately impossible time periods for execution. Or they could be met but under the condition that all other work that had been started up to this time were stopped. Whether they wish it or not it is assumed that the enterprise has been doing nothing at all and is just waiting for this order. An assignment that is carefully thought out and reinforced with labor, material and financial resources is a fortunate instance!

Having received the assignment, the enterprise most frequently comes up against a task with many unknowns.

Usually they do not indicate the main variants of the formulation of the overall task or the variant that is recommended for introduction (or the method of selection the most suitable variant for the conditions of the given enterprise or association). The enterprise is then faced with a difficult choice which determines the success or failure of all of its work. For it is precisely the choice of the variant for the overall formulation of the task that predetermines the volumes and time periods for work as well as their effectiveness.

Let us take a look at brigade forms of organization and stimulation of labor. Industry has been given a task: to make brigade organization of labor the main form of work. Enterprises have received planning assignments for the development of brigade forms of labor. For example, in the Ministry of Heavy and Transport Machine Building a decision has been made, during the course of the current five-year plan, to change about 78,000 more workers over to brigade labor, an average of 15,000-16,000 each year. Each all-union production association, production association and enterprise has been given a control figure for the inclusion of people in brigade labor in each year of the five-year plan.

What must the enterprise do? Create production brigades in individual microsections? Change the shops or perhaps the enterprise as a whole over to brigade forms of labor organization?

This choice determines the structure of the task that is being carried out (the number of stages in the solution and the composition of the subtasks in each stage), the range of effective subsystems in which changes are to be made, the composition of the participants, and the volume of work of an administrative nature that is necessary for finding solutions and implementing them. For example, in the former case it is necessary to control the development of suggestions or plans for the formation of brigades, organizational preparatory work during the course of the creation of brigades, and the establishment of brigades. This changeover can take approximately a half-year. In the latter case the range of tasks increases sharply. It is necessary to revise the organization of labor, production and management, and partially the production technology as well, and adapt to collective, brigade forms that which for years had been operating under the conditions of individual forms. We shall merely list the areas of work: specialization and cooperation of production, planning premises and equipment, including the installation of new units of it, the acquisition or manufacture of organizational supplies and industrial furniture, systems for operational production planning and operational control of production, cost-accounting relations, mechanization of planning and accounting work, the organizational structure of the shop and subdivisions, the organization of material supply and transportation service, repair and energy operations, and relations in the collective. In the third case the volume of work turns out to be very great, and the structure of the task is severely ramified. It is no wonder that the Kaluga Turbine Plant took more than 10 years to change all the subdivisions of the enterprise over to the conditions of brigade labor.

Another unknown is the organizational structure with which the working plans are realized. Many questions arise here: Which subdivisions should participate in solving the problem, what should be their functions and contribution to the overall solution, is it necessary to create special subdivision or public agencies to solve the problem, to whom is it best to entrust this work, and so forth.

Finally, the enterprise that has received its assignment for solving complicated organizational problems frequently not only does not have the necessary instructions and methods, but sometimes does not even know whether they exist or not and if they exist, where and in what form?

Attempting to solve a problem with such a multitude of unknowns ends up, as practice shows, as one of two possible solutions. In the first the assignment, because of many factors and not least of all because of a lack of control, they "put on the brakes," the task remains unfulfilled, and gradually it is simply forgotten. This happens, for example, in many branches with the development of systems for controlling quality and the effectiveness of production. In the second case, by trial and error the enterprises gradually revealed the variants of the statement of the problem and the organizational structure, they formulate the methods and they increase the skills of the personnel. This usually takes place slowly and with difficulty. Thus with respect to brigade forms of labor organization, for the majority of enterprises these issues have not yet been fully clarified. The methodological materials pertain mainly to the creation of individual brigades. Many questions are resolved on the basis of existing normative



documents which were developed many years ago with respect to the individual form of work. At the majority of enterprises, with mass changeover of workers to brigade labor, the engineering and production services are not included in the work, and the entire volume of restructuring has been on the shoulders of specialists of the Division of Labor and Wages or the service for scientific organization of labor. Everywhere the progressive brigade form of labor is superimposed on a production organization that has been taking form for years. Of course they do not mean and the new form takes its toll. In the end we do not achieve the effect we could have hoped for.

Let us turn again to cost-accounting brigades. The inclusion of workers in brigade cost accounting in branches of heavy and transport machine building as a whole should be increased in 1985 to 39.4 percent and by 1986--to 47.7 percent. Each scientific production association and, through them, each production association has been given an assignment. The standard provisions concerning brigade cost accounting, which were prepared by branch scientific research institutes of economics in 1981, could have been used in one way or another. The situation was more serious with respect to material support. Let us imagine that there are two or three families living in a communal apartment. Consequently, there will be two or three electricity meters in the corridor. But in production? At best there is one meter in a shop or a bay. Sometimes one meter accounts for the expenditure of electric energy by two shops at once. The same thing happens with respect to the expenditure of water, steam, gas, compressed air and so forth. One brigade has economized on oxygen while another has forgotten to close the valve.... There is no differentiated approach. Under the conditions of existing production, in order to bring the lines to the work place of each brigade it would take many kilometers of tubing and pipes, and dozens or sometimes even hundreds of meters and scales of various kinds. Moreover, the ministry's directive requires the enterprise to be faster, but it was necessary to submit orders for the acquisition of instruments by the middle of the year. It is no wonder that as of 1 January 1985 the inclusion of workers in brigade cost accounting amounted to 20.3 percent instead of the planned 31.8 percent. Such is the fate of a directive that is prepared arbitrarily.

#### How To Eliminate the Defect?

Organizational tasks are distinguished by innovation even if they are known with respect to their purpose. Thus at enterprises initially they formed specialized brigades of a simpler type. Then they began to create comprehensive shift and all-encompassing brigades, which include the basic and auxiliary workers of 5-8 occupations while retaining individual accounting for output, with work under a single contract, payment according to the final results of the labor, distribution of earnings according to the coefficient of labor participation, and so forth. Cost accounting brigades gradually began to develop after that as did self-management. Strictly speaking, in all of the aforementioned cases each time, even within the framework of one and the same brigade, an essentially new task is being carried out. The innovation is manifested in the fact that such tasks in each shop at the enterprise or within the framework of the branch are resolved one time in practice. For example it is only once that the enterprise must restructure the system of planning, the organization of control of production in connection with the

changeover to brigade forms of labor (although this can turn out to be a multistage process that is spread over several years).

Such new tasks have one important peculiarity: in order to carry them out successfully each time it is necessary to carefully carry out the first stages of the process of the resolution, the description of the situation, the disclosure of the problems, the formation and analysis of the overall task, and the disclosure of its structure. Going through these stages mainly research and investigation. The methodological support for them is poor. The developers rely directly on knowledge that is of a high level of abstraction: the theory of diagnosis, system analysis and so forth.

Out of four production facilities (enterprises, shops) the new individual plans are developed by the head planning institutes or subdivisions. They not only create the plan itself but also--which is no less important--they carry out the first stages in the process of its implementation and form the complex of instructive-methodological, organizational and information support for given kinds of tasks for institutes for standard planning and their subdivisions. Finally the selected variant of the overall statement of the task is known and the structure of the task that is being carried out during the course of planning is also clear. For the majority or all of the particular tasks there are satisfactory methods and standard solutions have been developed for many of them. The organizational structure is arranged in keeping with the tasks that are being resolved.

Naturally, the development of the initial plans (for example, thermal electric power stations with energy blocks of 500 megawatts using solid fuel) require greater labor expenditures and higher skills on the part of the workers than do subsequent ones that are created on the basis of these.

This peculiarity of the process of solving new and unique problems is apparently not taken into account when solving complicated organizational problems. The aforementioned "unknowns" therefore arise for collectives of enterprises and in practice each one of them individually is instructed to carry out the entire process of making and implementing the decision, including the first stages of problem-solving which are the most complicated. As experience shows, only individual leading enterprises which have highly qualified specialists are capable of coping with these tasks.

The key to solving the problem under consideration is efficient specialization and cooperation of the participants: interbranch scientific research institutions (the USSR Academy of Sciences, the USSR Gosplan, the USSR GKNT, the State Committee for Labor and Social Problems and the institutes and VUZes that belong to them) and branch research and planning subdivisions. It is necessary to determine the goals, tasks, functions and responsibility for solving each of the concrete organizational problems both for the enterprises and associations; they should be relieved of the responsibility of developing the first stages of the decision if there is not sufficient methodological and normative support on the part of the branch.

For a number of years specialists of the Division for Scientific Organization of Labor and the management of the Uralmash Production Association have had to

solve their own organizational problems when starting up new industrial facilities because in the plans developed by the Sverdlovsk Uralgiprotiyazhmash Institute there practically is no division for scientific organization of labor and management. Having experienced several unpleasant moments when discussing the plan at the Scientific and Technical Council, the authors, doing nothing to improve the organizational division of the plan, have contrived for years to get it through the state board of exports for the branch. To the remarks of the production workers concerning the poor development of issues of handling more than one machine tools, combining occupations, organizing and providing regular service for work positions, creating production brigades, providing material preparation for brigade cost-accounting and so forth the managers of the planning institute respond that they have no special subdivision and, consequently, no specialists. While during the first years it was possible to accept these excuses, after 15 years one begins to think: perhaps it is advantageous for the institute management not to have on its staff specialists in the area of organization of labor and management?

There is no doubt that a plan truncated in this way looks less expensive. The expenditures on the maintenance of the institute staffs are also less. But what if one were to look at it from state positions? Because of the poor quality of the technical plans many organizational measures have to be developed by the production workers themselves even during the course of the operation and reconstruction of the facilities, which leads to excessive expenditures of materials and funds and to a reduction of the effectiveness of production and the quality of the products that are produced. At one time specialists of the center for scientific organization of labor of the chemical industry, having tested 17 technical plans, discovered that in 14 of them the section for scientific organization of labor and management have gross errors. In the opinion of the leader of the group that checked the plans, the conventional economic effect from completing the four organizational plans would exceed 2 million rubles. And yet there are instructions from the USSR Gosstroy, SN-202-81, according to which the first stage of organizational tasks is carried out by the branch planning institutes.

Objections could arise: Why not try to have individual interbranch planning institutes specialize in solving organizational problems? Such an approach is possible. The only problem is that the level of training of these planners is not always the highest.

During the 1970's when industry was being changed over to a two- and three-unit system of management, large enterprises in heavy and transport machine building ended up in a difficult position because at that time in the branch there was no unified subdivision to coordinate the organizational and methodological issues and plan management systems. Incidentally, there still is none. In the Ministry of Heavy and Transport Machine Building the planning of the ASUP is under the jurisdiction of the technical administration and the improvement of the organizational structure of management is in the hands of the administration of labor, wages and personnel, and the planning and reporting on the effectiveness of the introduction of management systems is done by the planning and economics administration.

Uralmash workers were faced with a task--on the basis of Uralmash Zavod, the Scientific Research Institute of Heavy and Transport Machine Building which was on its books, and a number of enterprises of the Central Urals, it had to create a powerful production association for producing unique equipment for the mining and metallurgy industry.

Where to begin? Where to turn?

All the "help" from the ministry consisted in applying pressure to accelerate the work and limit the number of personnel on the management staff.

Searches led to the Perm NIIUMS (now the Parma Scientific Production Association) which was glad to take responsibility for planning the Uralmash ASU, during the course of which it also thought about creating the organizational structure for the management of the association.

The first joyous business meetings with the planners were replaced by sad ones. The planners did not go beyond analyzing and issuing recommendations for the general plan and it seemed that once they had received the regular monetary deposit they withdrew from the team. In addition to us they had an agreement with the automotive workers and also a number of enterprises. We rushed to the Institute of the United States and Canada of the USSR Academy of Sciences. But here they only gave us literature. And we thank them for that. At the same time the deadlines were pressing down. The specialists of the service for scientific organization of labor and other subdivisions of the head enterprise--in haste, by the trial and error method, under the conditions of existing production--had to develop alone the charter, provisions and organizational structure for the management of the Uralmash Association and achieve the introduction of a two-unit system of management and acquire the basic rights of an all-union production association.

There are examples of effective interbranch specialization and cooperation in solving complex organizational problems in our industry (the aviation industry, shipbuilding and others), and this experience should be extensively utilized. The organizational structures that carry out processes of solving and monitoring problems include branch scientific research institutes which are appointed as the head ones for individual problems, divisions for scientific organization of labor of production and management in the head production administrations, and branch laboratories or divisions at the base enterprises and in the associations as well as subdivisions in all the other (not base) enterprises.

Their interaction, in broad outlines, takes place as follows. The head scientific research institutes mainly conduct research which results in the development of the structure of the task and the initial methodological provisions. The base enterprises each solve their own task which is determined by the plans of the branch. The results of the introduction of the solutions to the particular tasks are discussed in the staff of the branch and then the solutions are reproduced as standard ones for all enterprises of the branch. All the work is conducted according to a unified plan.



The leading branches create complexes of documentation in the form of standard plans for the organization of the work places for mass occupations and engineering and technical personnel, standards for organizational supplies and production furniture, plans for systems for regulated service of the work positions, standard organizational plans for the sections, shops and services, the organizational structure of management and so forth. In the experience of these branches one can clearly trace a sequential changeover from solving local and organizational tasks to more and more complicated ones such as the development of plans for comprehensive organization of labor, production and management in the shops of the basic and auxiliary productions.

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MORAL, PSYCHOLOGICAL ASPECTS OF BRIGADE LIFE DISCUSSED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 8, Aug 85 pp 151-199

[Article by Nina Maksimova: "Brigades at the Crossroads"]

[Text] A good deal is now being written about brigades. Our magazine too has repeatedly addressed this subject (1980--Nos 4, 11, 12; 1981--Nos 1, 5, 7, 11; 1982--No 4, 7, 11; 1983--No 10; 1984--Nos 3, 5, 6).

The authors emphasize the generally favorable influence on people and production exerted by collective forms of labor organization, while at the same time noting certain difficulties related to the process of "brigadization." In the decree of the CPSU Central Committee, "On Further Development and Increased Effectiveness of the Brigade Form of Organization and Stimulation of Labor in Industry," (1983) it is noted that there are still essential shortcomings in the development of brigade organization of labor: sometimes the creation of brigades is formal in nature, like a campaign; sometimes unnecessary haste is exhibited in this matter; preference is given to the quantitative aspect to the detriment of the qualitative aspect, and so forth. The decree emphasized that it is necessary to devote serious attention to the formation of a healthy moral and psychological climate.

This is why the editorial staff was struck with the idea of looking into brigades, listening to the workers and observing certain critical processes. This was the assignment of the author of the article which we are offering for your attention. These notes on the life of collectives augment our ideas with new observations. They do not pretend to be a comprehensive elucidation of the life of production collectives. Attention is concentrated mainly on moral and psychological problems. It would seem that the processes encountered by this journalist are not typical of all brigades. But it is necessary to know about

them in order to more successfully overcome the possible shortcomings, to make the brigade form the main form of organization and payment for labor and practice, and to move more confidently toward those "standard" forms of brigade organization which are wonderfully described in the book of A. Levikov, "The Kaluga Variant."

The facts considered in this essay were gathered at five industrial enterprises belonging to various ministries--primarily of a machine-building profile and also ferrous metallurgy.

### The Leaders in a Blind Alley

The chief of the leading shop did not want to tell me about the successes of the brigades. But he discussed his doubts. About 3 years ago they thought about conducting "all-encompassing collectivization" in the shop, joining all workers into brigades. And then he came up against the only tooth-cutting mill operator in the shop, who could not get used to being in a brigade. The shop chief did not meet him halfway when the latter asked for piece-rate wages. The young "king" of the machine tool operators went to be a guard in the neighboring shop and was satisfied: in his extra free time he took up beekeeping and sells honey on the market. And his former manager is now sorry that he lost a skilled worker. For "all-encompassing collectivization" did not happen. "Recently I asked the director to find a sociologist (we do not have our own) to investigate the microclimate in the collectives. Incomprehensible processes are taking place in them. I was told that 20 years ago two brigades were created in our shop, the best people were gathered there, the brigades were successful for a while, and then they fell apart. Perhaps the second wave of brigades will fall apart in the same way? Now a couple of people from one brigade have turned in their resignations and I cannot get a clear explanation from them."

"But what if you were to speak with them?" the shop chief unexpectedly suggested to me.

The dinner break came to an end and the lathe operators were playing dominoes. But without enthusiasm. And having halted the game all at once, they went to their various places when the light went on and the machine tools started to hum. The brigade leader and I sat there a little while longer. The brigade leader was young and bright, and virilely handsome. Indecisive words did not go with his image. He said that the people left for various reasons having nothing to do with production. Two of them had become tired of living in communal apartments with their families. A third was suffering from a recently discovered heart disease. Even the brigade leader himself did not intend to stay here. He wanted to start taking care of his health early and to look for easier work.

The rest of them spoke with the same tone. All of them were absorbed in their own daily problems. They say that this was one of the friendliest brigades in the shop. Even now there were no arguments here, but it seemed that nothing joined them together. It was as though the center had been pulled out of the

collective. They worked in an exemplary way. Without discussions and without cigarette breaks (so as not to waste work time they all decided to stop smoking together).

About a month and a half ago the brigade had had a conflict with the shop chief about the helmets in which they were supposed to work because the crane carried heavy pieces of metal over them several times a day. But to stand at a machine tool in a helmet for an entire shift, and especially in the summer in the heat.... Having seen the lathe operators without their helmets, the shop chief took away the bonus from the senior foreman whom they respected and the next time told him to turn off his machine tool. When the director himself came to them they put on their helmets, but when he left they took them off again. The conflict lasted until the directors made a decision for an "informal abolition" of the order concerning helmets during the summertime --under the condition that the workers would be careful.

"Our chief is exceedingly principled," said the workers, emphasizing the word exceedingly. "In other shops they work underneath the cranes without helmets and the administration looks the other way."

I said that they were not being fair. After all, was the shop chief not being concerned about safety for their own good? He was a creative, progressive leader. Is it easy to update an old shop? But that is what he is doing. It is clean in the shop, machine tools with numerical program control have appeared, and there is a comfortable room for rest....

The workers smile: the chief is concerned about safety for his own sake. And this is understandable: for he is the main one who is responsible for injuries and accidents in the shop. But if the manager were more concerned not about his own piece of mind, but about the workers, he would think of a way to remove the crane, for a heavy helmet is an extremely arbitrary means of protection. He is updating the equipment for his own prestige, and they have no place to rest in the room for rest. "You say that he is concerned about the brigade? Why does he walk right by without saying a word?"

"Yes, it is impossible to see people behind the curtain of production concerns," the shop chief said bitterly after hearing my conversation. "Is it possible to keep the brigade from disintegrating? What what does one do here? If a person leaves because of his health I do not have the right to keep him. The apartment situation is poor at the plant, I have been waiting for 10 years.... But previously there were not enough amenities and there were other difficulties, and not everyone was satisfied then either, but something kept them in the shop!"

"But is it not possible to move the crane to another place so as not to force the lathe operators to work in helmets?"

"Impossible," the shop chief answered categorically. This would require changing the entire shop around. Even he with his inclination toward innovation was not capable of this. And he did not attach much significance to the conflict--he was convinced that he had acted in keeping with principle. And therefore he was looking for other reasons for the current mood of the



collective. "Perhaps they had lost confidence in the brigade leader? Previously he was a hard-working chap. But recently he has begun to slack off. He halfway wants to be transferred to another job while retaining his average earnings. And the brigades can see this!"

"But why has the brigade leader changed so much? And if the brigade has lost confidence only in him...."

The shop chief did not object or try to defend himself. He thought. He said self-critically that in spite of his two higher educations (mechanics and economics faculties) he feels that his preparation is limited. He is always lacking something...most likely knowledge of sociology and psychology. But he cannot go to a third VUZ for that!

Recalling such a typical complaint, I thought: Is it necessary to complete several VUZes and courses in order to become a wise and sensitive manager? Perhaps, on the contrary, they are beginning to give us special training in too many things? Today it is recommended that managers even study communication competence and sensitivity training is arranged for them--so that they will feel correctly and react correctly. I may be wrong not putting much stock in such intellectual gymnastics, but I see in this an attempt to replace the moral experience which everyone must acquire for himself (making mistakes, contemplating, suffering) with a judicious accumulation of information, which has not knowledge that has been experienced and is being reflected. These "educations" are not the same, just as compassionate natural sensitivity is not the same as that which is artistically regulated and skillfully doled out. And probably even the progressive shop chief has a natural sensitivity which, although not atrophied, has been stifled under the burden of production concerns and knowledge that is useful for business. I do not know whether he will manage to restore the collective--after all this requires more than keeping people there; it will probably be necessary to do the impossible. For example, "turn the entire shop around," so that just a couple of people will be able to stand at the machine tools without wearing heavy helmets.

But during our first conversations neither the shop chief nor I could fully explain the reasons for the alienation of the workers from the shop, from the brigade and from labor. I was able to sense its sources only after getting to know many other collectives which were called leaders. They had achieved high labor productivity without allowing absences or other violations. But behind the favorable indicators there was a contradictory, tense and one might even say a critical atmosphere.

In this shop I was interested in the brigade which consisted of lathe operators of various ages and skills. Here I also found two people who had remained in the shop from those successful brigades 20 years ago. I asked why the shock collectives had disintegrated. The answer was surprisingly down to earth: "They have begun to speak nonsense about one another and to check on who is working how...."

"But now they will not allow the brigades to disintegrate," said the current brigade leader. "The administration needs them. But the workers? How does one say.... I would not like to win anyone over."

I found it difficult to take my eyes away from his hands filled with power and health. I felt how every hour there was an ache in the heart in which a meter ticked away insatiably and indefatigably. The brigade leader knows precisely to whom he should pay how many rubles from the brigade pocket. More precisely, from the pocket of three people: the brigade leader, his brother and the deputy brigade leader. And this is the nucleus which is "winning over" all the rest. The rest of the members also amount to three. Two of them are young and inexperienced ("There is nothing to reproach them with, they try, but...they earn 200 and we pay them 300; there is nothing else we can do for otherwise they will leave the shop"). It is especially painful for him to recall the third one. "He produces no more than 250, but receives 350. He has 3 years left until he receives his pension."

The brigade is working under a single contract and the wages are divided up according to categories. The categories of the young machine tool operators are elevated and are conventional. The older one deserves his high qualifications; he was a brigade leader himself for 20 years; he went around to the oblast championships of lathe operators, and he was the mentor and trained the current deputy brigade leader. Even now this ace produces products of irreproachable quality, but his rate.... He cannot even keep up with his 45-year-old student, or the 30-year-old brigade leader and his brother.

My conversation with the former champion and the former brigade leader did not turn out well: he shrugged his shoulders, smiled in confusion and looked around all the time--to where the present brigade leader was working without raising his head, but was seeing everything. Then when the brigade (the nucleus as a group, and the rest individually) went for their lunch break, I spoke with an elderly woman who had come into the shop as an adolescent. She was also a part of this brigade. But not for long. "When I worked individually I could rest a little bit when I was tired. And I fulfilled the norms. But here the minute I sit down the brigade leader comes up: he says that they want to win me over." She asked the shop chief with whom I was already acquainted to take her out of the brigade. But he was still attracted by the idea of "all-encompassing collectivization." Nonetheless he went to brigade leader and reminded him that after all this was a woman and after all her age.... He ordered that she be able to rest 10 minutes for each hour of work. But even after that the atmosphere in the brigade did not become any warmer. Soon the woman was fired under the 33rd rule for coming to work drunk. But a year later the shop chief asked her to return--he did not have enough workers. She made a condition: "Only not in the brigade. Even if my wages are lower...." They hired her for repair work, on a salary.

The former champion was handled more delicately and no open dissatisfaction was expressed--but still he too had recently asked to go on salary. The shop chief gave his consent. He had already abandoned his plans for "all-encompassing collectivization."

"But how would you yourself prefer to work--in a brigade or individually?" I asked the 30-year-old brigade leader.

"The three of us would work together."

I thought that this collective too was programmed for disintegration (it does not matter whether they are dismissed or continue to work next to one another but alienated). Within the nucleus also the balance of forces will be violated sooner or later. For example, the older deputy brigade leader will begin to get tired and fall behind--and he will feel the glances of his stronger comrades.

Comrades?... But in fact who are they to one another?

The shop chief speaks of the brigade with respect: hard workers. He sympathizes with the former brigade leader. And the current one also. "Something is not right there, I noticed.... But in his position I might be even more nervous than he is. That brigade makes small items, the rhythm is the most intense in the shop, and because of the imperfect norms they receive less than other machine tool operators do. And the brigade leader is not always such a miser. He is one of the few patriots in the shop and is capable of self-sacrificing deeds. Recently one of the areas in the shop caught on fire--and he was the first to run to give assistance."

Something is beginning to put me in the position of the manager. With what should one reproach him? He is honest, he does not hide from contradictions or crucial problems. In order to put a stop to the "self-seeking motives" that have appeared in certain collectives he has achieved the introduction of student additional payments for newcomers (not out of the brigade pocket). He looks for appropriate work for all older people who wish to leave the brigade. He sincerely wants to understand what is happening with the brigades--why previously it was difficult to enlist strong workers, but now it is the weak ones? He already sees the link between the imperfect norms and the unfavorable production conditions and the strict accountability in relations within the collective. But it is bad that he has begun to become accustomed to such an atmosphere and halfway agrees with it. With respect to the elderly woman at least he reproached the brigade leader, but regarding the departure of the former champion there were no conversations with the brigade. Probably the manager still does not sense the connection between the relations in this brigade and the disintegration which bothers him in the other brigade where strong young people who have become concerned about their health in time do not wish to work here until they are as old as the former champion.

I had a better understanding of the attitude of the shop chief after I had met with many brigades where the attitude toward newcomers and the elderly was much more severe. According to the observations of those production workers who spoke with me attitudes of severe alienation take form in the collectives that are operating most intensively. It is precisely in their lives that situations take place which cast doubt upon the conclusion of the majority of researchers to the effect that newcomers are assimilated into the brigades more rapidly and easily. I know of several brigades in one shop who within a month returned a newcomer to the foreman: "We do not need him." This means,

which is quite natural, that the newcomer has not yet managed to fit in. The administration puts him on individual piece-rate work, but the brigade gets all the advantageous work, and he alone receives what is left over. Those who can endure the most gain qualifications and are "absorbed" in the various brigades. It is much more difficult for the elderly. I was struck by a conversation concerning two rolling mill operators of prepension age who began secretly to cause little problems in their machine tools so that they could rest while the adjusters repaired them. The brigade quickly noticed this and put a stop to it. And it called them sluggards.

I began to listen attentively to the discussions about sluggards in such brigades. Something separated them out too much. I found out exactly who they were. Almost everywhere they were either the youngest or the oldest people--those who can no longer keep up with the general busy rhythm or who are not yet able to. I drew the attention of the workers with whom I talked to this, especially those who were bothered by sluggards. But the comparison did not shock them. Their position was inflexible. It is just advantageous to keep newcomers and old-timers in the brigade." "There should be no weak members in the brigade." "We will not process weak people."

"To process." This is an old word which sounds new in the brigades. I am bothered by the ease with which the new meaning, which has not even found its way into the dictionaries, has entered our life. In research and journalistic articles it is used in a businesslike way, without the embarrassing quotation marks and moral evaluations. It is not difficult to note that it is commonly used in those brigades where the meter is turned on and the "weak people" become a burden. The strict justice of natural selection. Is it native to collectivism? The real collective is one where a person feels not only responsibility before his comrades, but a spiritual attachment to them. Such a collective needs elderly people--protectors of traditions. And also inexperienced newcomers--without them there is no future. And weak ones. So that they can be concerned and protect them. And manifest and maintain their kindness. But in places where there arises the question "Who processes whom?" other values take the upper hand. Sociologists have such a concept--"anticollective." That is a collective in which orientations and attitudes degenerate, and there is an alienation and an antipathy toward one another. Is this not the kind of degeneration that is beginning in those brigades where it is difficult for the weak ones?

In the all-encompassing brigade of machine tool adjusters they had a different attitude toward the elderly person. He would tell the brigade leader that he was tired and go to work the electricians where it was easier. The brigade leader, who was also older, felt sorry for him: the electricians had lower wages. And then the adjusters invited the electricians to join their collective.

"And did this make it better for the elderly worker?" I asked the brigade leader.

"I do not know," he answered without assurance. "Anyway, we did not throw him overboard. And now his earnings are good. But now the electricians have begun to work harder and help us in their spare time."



In my opinion, the elderly adjuster has better luck than the former leader of the brigade of lathe operators. People sympathize with him and want to help. But this does not turn out very well at all. The elderly person too is forced to work again at a rate which here, as in many other highly skilled brigades, is intended not for the "average," but for the physically strong individual. It is as though the collective has entered a closed circle. There are reserves of kindness, but it is difficult to realize them. I know that many specialists laugh and say that production conditions in general do not contribute to any emotional outbursts or manifestations of sensitivity. We are inclined to agree. Let us look at how the unfavorable conditions are created. For the conditions, structures and systems which are actually beginning to take control over people are still created by people themselves.

Previously many workers envied this brigade of communist labor and said that it had been granted special conditions. The collective in which there were female lathe operators and male drilling machine operators had its own territory that was assigned to it. An agreement had been concluded with the administration, according to which blanks were delivered regularly (other collectives in the shop wish to conclude such an agreement but the administration was not so confident that the other deliveries would be so regular). The brigade leader himself distributes the work and the administration does not intervene in the distribution of the wages within the brigade.

But a critical situation was created here too. The division for labor and wages reduced the rates the next time. The collective reacted sharply and even wanted to "be reformed." Not so long ago they were persuaded to eliminate the position of the washer and the person who removed the shavings (declaring that "the advanced collective had displayed initiative"). The rhythm became more tense, but the workers put up with this because the wages of each were increased by about 20 rubles. The reduction of the rates in the brigade now was perceived as a "deception" and they thought that they had simply taken away those additional payments for doing associated work.

A customary trick of norm-setting, but one which difficult to explain, was put into action. The rates were reduced, but the labor-intensiveness of the work and the brigade did not decrease, but actually increased. No large improvements were introduced in the brigade, advanced methods were not mastered, the skills remained the same as before--but the plan increased. In order to achieve the previous level of wages after the reduction, the machine cooperators had to increase the intensiveness of their labor. But they could not "squeeze out any more" in this brigade. In the end the previous rates were reinstated. But the situation remained crucial.

In order to fulfill the growing plan, they long ago departed from the technological process developed by technologists and used their own accelerated methods of manufacturing parts which were not registered anywhere (and if you register them they will again cut the rates. Therefore the "underground" streamlining exists in many brigades. But even if these hidden reserves have their limits). The machine tools here, like all other equipment in the shop, are old, they frequently break down, and the repair workers are

the last people in the leading brigade: "You fulfill the plan anyway." When a new worker failed to fulfill the norm because of frequent breakdowns of the machine and delays in repair, the brigade leader reduced her earnings. The punished person objected. "No, you are not guilty," the brigade leader answered her. "But nobody will do your work for you." Not willing to put up with such a policy, the newcomer left. About someone else who wanted to be in the brigade they told the brigade leader: do not accept him. He also has a bad character!" The brigade leader threw up his hands: "There is no time for us to manifest our character. Either you leave or you stay and do what everyone else does." And it is true: Surprised and disturbed during the first days, she became "like everyone": she works quickly and silently.

A couple of years ago they used to meet after work, they celebrated family and personal events, and they went to the theater and to the movies together. Now these ties have dissolved. They explain this by the fact that the backbone of the brigade has become older and many new people have appeared. And also by the fact that they are tired of work.

The theme "who processes whom?" cannot be heard here. But the brigade leader is angry about the number of people calling in sick. She asked a young mother directly: "Are you going to be on the sick list or are you going to work?" The latter, frightened, swore that "she would do that no more"--and on that same day she fell in a ditch, broke her finger and was out of work for a month. And during that time the overloaded brigade fulfilled the plan with a smaller number of people.

"You came to the wrong place; our stars have already burned out," sighs the brigade leader, a woman who is no longer young, with a direct and powerful gaze. She is honorable and has a medal for brigade services. "Our collective is no longer interesting."

The top brigade leaders found themselves in a situation where, inspired by the growing wages, they had started off fast, had accomplished a sharp increase in labor productivity and then (now nobody wants to be in their position. They have learned from this experience) be more careful about concealing reserves, use all measures to retard the growth of productivity and so forth). But what about the leaders who have exhausted their reserve (not only physically) and have ended up in the blind alley of intensification? Should they disperse among the other enterprises at their own request, get rid of those who are frequently ill, the newcomers, the elderly and others who are weak? After all, under such severe conditions it is indeed difficult to be kind.

I asked:

"Do the administration, the party committee, the division for labor and wages know that you are at your limit?"

"What do they know about us?"--the brigade leader answered bitterly. "That we work well? This is shown in the reports up to this point. Because we fulfill the plan. But how do we fulfill it? We cannot hold out long."

I decided to go to the division for labor and wages for help. I asked that they review all the ratings in the "reverse direction," according to the technical process. To be sure, that will be necessary to divulge the underground efficiency work. But there is no other path.

One of the managers of the plant division for labor and wages with whom I discussed the difficulties of the brigade became disturbed:

"No, we had no idea that the collective was in such a condition. But even if the brigade leader had come to our division, we would not have been able to help her. Probably the brigade needs new technical equipment, but it is under the jurisdiction of the head engineer. And increasing the wages?--This is tantamount to rejecting everything that the brigade has achieved! What point would there be in reducing the number of workers and increasing labor productivity?! No, let it continue to work under these conditions. If it cannot do it any more, let it fail at the plan. We shall cease to indicate it as a leading brigade."

How could that be? Only a couple of days ago, before becoming familiar with the brigade, I had dropped into the division for labor and wages--and this same person had said heatedly and candidly:

"The inspectors ask why even though we have brigades in our plant the wages are almost not increasing? But who said that wages absolutely must increase in a brigade? This happens only if the number of workers is reduced and occupations are combined. But if the norms are technically substantiated (and they demand that they be this way), a lathe operator must become also a janitor and a handyman. The quality of the labor suffers, the equipment is abused, and the rhythm becomes too intensive.... The only brigades that work well are those which have not exhausted their reserves. As long as the rates are not cut to the limit, they have wages and the atmosphere is good. In order for a brigade to be actually a leading one, it is first of necessary to have atmosphere. But everywhere they are talking only about the plan and about labor productivity.... We should like to put a stop to all of that."

So why not try to stop the course of events and help at least one brigade, all of whose "initiative and achievement" have been suggested to it by the administration? But today one cannot see such desires on the part of the division manager. Several days ago I spoke with a person who was inclined toward sincerity, but now he is a follower of instructions. What is one to think about all this? I repressed my disturbance, saying to myself that it was leading me to overstate things like a child. I was probably wrong to judge the manager so harshly, since I had learned of the ambiguity of his position because he had been frank, which had not been necessary at all, and expressed doubts, from which, perhaps, inactive moral and civil position might begin to be formed. That is what I wanted to think. And then it would be worthwhile to hope and wait until the position crystallized and became more definite. The only thing was that the brigade could not wait long.

"Have you not tried to analyze the activity of the collectives in order to understand the logic of their development, to foresee what might happen and give warning?"



"In the shops one can find data concerning labor productivity in the brigades for several years," responded the manager of the division," but, of course, this still cannot be called an analysis. We are only just preparing for a serious analysis. We have appointed a specialist to master the methods for calculating the effectiveness from the brigades.

So the specialists are learning to figure out what the brigade can produce. But what about what can be given to it? No, the new methods will not show where the brigade is going and what will happen to it in several years.

It seems that we have approached an answer to many of the problems which still remain open. Why have the leading brigades, which ran the distance of development more rapidly than the others, ended up in a blind alley? Why are mercantilist attitudes becoming stronger, and what is stimulating this? Why are the leading brigades the ones in which relations in the disintegration of collectivity are misrepresented behind favorable production indicators?

This became possible because an unimaginative utilitarian consumerist attitude was formed toward the brigades and this is also felt by the workers who say: "The administration needs brigades"). The standard pattern was imposed in the forms of accountability and in the instructions and orders that came to the enterprises from the higher levels and demanded that the brigades succeed in increasing labor productivity and strengthening labor discipline. So far there is no integrated concept of the development of brigades, but there is already a stereotype of the evaluations which consider the collectives primarily as a means of increasing labor productivity. The "purist" variant of utilitarian relations: the brigades are started up like instruments and they increase labor productivity "using muscles." The administration grants them "complete independence": It is not concerned about their mechanizing their labor and does not delve into their interrelations. This is precisely the attitude toward the brigade of communist labor described above. But this utilitarianism is not always expressed so categorically. I have already given an example in which the administration paid truncated attention to the brigade--an essentially formal concern for safety worsened the conditions for labor and the moral and psychological climate. I have also had occasion to meet with brigades which have been given new technical equipment and means of mechanization--but even there the intensification was not extreme. Because the mechanization was directed more toward increasing labor productivity than toward making labor easier.

One of the heroes of the book "The Kaluga Variant" allowed the possibility of excess intensification of labor in the brigades. Workers of the Kaluga Turbine Plant objected: reasonable limits of intensification are provided by the clear-cut framework of the work day. But even within this framework it is possible to concentrate the rates excessively, as I saw from the example of the brigades already described as well as others.

Frequently I find in newspapers announcements in which they write rapturously about collectives that are working without stopping, without wasting time even to talk. Perhaps I am wrong, but I prefer a rhythm in which the individual during the course of the work day can stop for a minute, look around at his



work, have time to think and exchange a word with his comrades. One can hardly call these minutes losses of working time. The culture of labor and relations begins with them. An excessive intensification makes labor automatic, impersonal--which has been known for a long time. But up to this point the researchers have not determined the threshold beyond which further increasing the intensiveness of labor leads to harm for everyone--not only for the quality of the products, but also for the health of the individual and the collective. Obviously the leading brigades have overstepped this threshold, but nobody has tried to stop them. Is this not because the specialists and managers of the enterprises have become accustomed to the following opinion: in the majority of production collectives the rhythm is certainly not strained, there are considerable losses of working time and internal reserves are not being utilized so that on the whole they are still far from the limit of intensification. And this means that brigades that are working intensively are not typical. But this is not making it any easier for them!

Probably now, when decisive significance is being attached to brigade organization of labor at the enterprises, it is necessary to clarify the question of the concept of intensification of production. In order for the growth of labor productivity in the brigades to take place not as a result of increasing its difficulty to the extreme, but because of more efficient, intelligent utilization of human energy. As early as the 1920's, when increasing labor productivity became vitally important for the country, at the initiating conference on scientific organization of labor it was demanded that the strategy for intensification be humane. They advanced the slogan: "Productivity for the workers, and not the workers for productivity!" In the 1960's it was rhythmical: intensification of production--this is not intensification of labor, but intensification of technical equipment."

An important contribution to the development of the concept of intensification was made at the April (1985) Plenum of the CPSU Central Committee. It was noted that its main strategic lever should be acceleration of scientific and technical progress. This will also require a revision of certain directions for the development of brigades. For up to this point the goals and means of intensification and brigade organization of labor have not been intercoordinated.

But how does one lead the leaders out of the blind alley today, when the moral concept of the intensification has not been clarified and the concept of the development of the brigades has not been worked out? How does one help other brigades avoid this? The manager of the labor division, as you will recall, can suggest nothing. I asked this question of his colleagues at various enterprises as well as other specialists. Many of them discussed the fact that the brigades need engineering support (they are already writing about this in newspapers and research literature, and this is required in the aforementioned decree of the CPSU Central Committee of 1983). That is, it is necessary to update technical equipment promptly, and not just in critical situations, and to take measures for automation and mechanization of labor which would enable the brigades to work with high productivity, but not with excessive strain. Certain specialists thought that, without waiting for scientific recommendations, they should look for possibilities of limiting intensification. For example, they should establish the limits for which it

is possible to reduce the number of workers in a brigade. Or, in spite of the logic of norm-setting which still does not take into account the possibilities of making labor easier, they should still not reduce, but increase the rates for brigades which have ended up in an especially difficult position. Certain managers have not begun to take appropriate measures to protect intensively developing collectives from disintegration.

But the majority of production workers were nonetheless alarmed about the reduction of the rates of growth of labor productivity in these brigades, and not about the deteriorating relations. They were energetically in favor of searching for additional reserves. They suggested that the forms of distribution of wages be revised. In a brigade which has elderly workers with high categories they should use the coefficient of labor participation which stimulates labor productivity. In places where there is too much sick time they should send a psychologist and let him look for emotional resources for increasing productivity. "And have you heard about the Aksay method? It is very effective...."

They assert that the popular Aksay method gives the workers an interest in increasing labor productivity. Its essence is that the brigades themselves find possibilities of reducing the labor-intensiveness of their work and receive a one-time bonus for this--a certain percentage of the savings that is achieved. Obviously, various interpretations of the method are possible. In the leading brigade of carpenters which was recommended to me it looked simple. The workers themselves cut their own rates. In 3 years they cut them by 30 percent. And then they ended up at the limit. They became perplexed. They were waiting for something.... On the territory of their section - nailing machines which the engineers intend to introduce here. So far the machines are not in operation. When are started up perhaps an advanced method will again be included in the brigade. Up to the next limit?

#### The Labyrinth of an Unstable Shop

This shop has already been aging for many years because of poor rhythm and in unstable deliveries. But a resolute young shop chief thinks that even under these conditions it is possible to fulfill the plan all the time. That is, if one were to utilize all the reserves of brigade organization of labor.

One of his deputies, who had previously been in charge of the trade union shop committee, told me enthusiastically how they intended to utilize these. He had read more brochures and articles about brigade forms than anybody else in the shop. Therefore even now he continues to keep up with them, although this is no longer a part of his duties.

He walked with me through the shop and prevented the view of the central bay with a broad gesture:

"Here we shall create a large all-encompassing brigade, as is now being recommended. We shall link them all to the final product. This will make it possible to reduce losses of working time. And we have many of these losses."

"And do the people agree?"

"Not yet," the former trade union organizer answered after a moment of silence. "And to be honest, we do not do very well at introducing modern methods. The brigades are stubborn and they have their own ways. They do not want to be consolidated and apply the coefficient of labor participation when distributing wages, and they do not take collective responsibility for production discipline. I have had so much trouble with this responsibility! I have read that the method works well in certain enterprises. At first I began to persuade the brigades in which there were no violations. I convinced them that they were risking nothing and that there was a direct advantage: And an addition to the 13th wage because of the lack of violations. I convinced one brigade. They liked the addition to the 13th wage. But the next year a newcomer came to this brigade and was absent a lot. Then the brigade was disturbed because all of their bonuses were reduced because of this absenteeism.

I asked him if he had not had a chance to look at the publications which deny the progressiveness of the method of collective responsibility. He had not read them. But he was bothered by the lack of uniformity of the evaluations in the literature which he believed in so much. What then should be introduced and what should not? He will probably go back to the books in search of an answer to this.

I spent an especially large amount of time in an unstable shop, becoming familiar with the brigades, which interested me because of the diversity of their nature, their unified conservatism, and their stubborn resistance to those methods of brigade organization of labor which are considered advanced today. They divided up their earnings equally, in spite of the difference in forces, experience and qualifications. They did not eliminate smoke breaks or tea drinking, and they looked the other way when it came to sick lists. If somebody had urgent personal business, perhaps warning the brigade of this, they would come to work late. It was not necessary to finish their work (unless the foreman notices and forces them to, but the brigade does not report to him its "deviations from the norm." And so here we still have the collective guarantee which is evaluated negatively by today's researchers on collectives but was not censored by yesterday's). The mutual concern extends to the point that a person who comes in with a hangover is given the easiest work, and the rest of the collective does the more difficult work itself.

Life in an unstable shop is electrified with contradictions and lit up with outbursts of conflicts. Especially when the shop managers promptly press the levers for increasing labor productivity and take decisive measures for reforming characters.

What to do about self-seeking? At the beginning of the month the brigade of mechanics, who close the shop technological chain, have almost no work. During the second half of the month it is quite the contrary. The mechanics are called into the manager's office. The negotiations are conducted not by the shop chief, who is called principled because of his inclination for decisive measures, but one of the deputies who is able to find a common language with the workers (anyone who needs to "cover up" an absence with an application for leave without pay comes only to him). A delicate system of



interdependencies goes into effect. The deputy, with a charming smile, asks "to work on the plan." The administration compensates for everything in the form of leave and bonuses." But the brigade is silent for so long that the deputy begins to worry. But then comes the question of the brigade leader, which has become rhetorical: "When will we be able to work normally and rest normally?" Having deliberated for the sake of form in the little corridor, the brigade named its usual price: 200 rubles in cash each. For these 200 rubles, which the deputy humanly calls a bonus and the mechanics call bribe money, they will work overtime and without days off, forgetting about illnesses, hangovers and urgent personal matters. Having turned in the last planned products and received the bribe money personally from the deputy, they "wash" it by exchanging it (not far from the plant analysis, near the tree plantings, the roofs of the private moneychanging stands are turning black, and next to them on a warm evening one can see small groups of people--these are the brigades talking informally and strengthening their unity). When "washing" their money they try not to think about the shop. They know that they are considered self-seekers there. They guess that even a deputy calls them that, the one who conducted negotiations with them, after which it was unclear who had driven whom into a corner.

I came to visit them during the first days of the month. They were having long cigarette breaks. They had not yet rested up from the rush work. A mechanic about 30-35 years of age explained to me why he needs high wages.

"I have hard, dirty work, and I cannot enjoy it. And what kind of conditions? Next to us is the central entrance to the shop and the door is always wide open. In the winter it is cold. I said to the shop chief: 'if they would just give us warm vests.' 'Well, you just work and then you will be warm.' I fall asleep in the meetings where the chief reads lofty words from papers. Yes, I work only for money! I want everything to be the best in my home. I want to dress fashionably. I have a library and it is not cheap. My car is old and I spend a lot of money on spare parts, and have gone into debt. I need a new one."

Having proved the need for high wages and that there is always something to spend them on (if not in the stores, in the markets the "enticements" are fairly expensive), the mechanic says:

"But neither 500 nor 600 rubles in the wages is enough now. We are tired."

Having finished a cigarette, he threw it down with the usual indignation:

But we earn our bribe honestly. Anyone who does not believe this should spend some time with us at the end of the month."

"If they are bribe takers, it is not of their own doing"--With this opinion I went to the shop chief. "Are the workers not driven to self-seeking by the working conditions and the policy of the administration which at the end of the month is prepared to fulfill the plan at any price, and at the beginning of the month thinks that the price that was paid is too high?"



The shop chief smiles ironically:

"Well, I see that they have influenced you with their ideology...."

He is convinced that the self-seeking arose because previous shop managers had "played at being democratic." Previously the brigade had worked both overtime and on their days off without additional payment. Then they were disturbed by their rates which were the lowest in the shop. They were increased by as much as the workers asked for. And this, in the opinion of the current shop chief, gave rise to their self-seeking attitudes.

"And did you believe that they do not want any more emergency work or any more bribes!--he is struck by my naivete. "All of those self-seekers talk this way. But when the supply for the shop is normalized they begin to provoke emergency situations: during the first half of the month their machine tools break down too frequently and they complain about the quality of the blank pieces until they are promised a bribe. I have heard what frequently happens in other shops. And I do not want that to happen here. There is no need to contemplate the contradictions of self-seeking; it is necessary to fight against it."

Without ceremony they remove the former brigade leader--he was too clearly in charge. But the new one could not do the job; his hands were tied by the problems of the former leader. The shop chief had to act resolutely and according to principle. Well, almost. Accompanied by the deputy and a specialist for contacts with the workers, he went to the home of the retired leader. Over tea he confidently asked if he would be against having as brigade leader his brother-in-law, who is also in the brigade. Since that time the reforming of the self-seekers has proceeded successfully in the eyes of the manager. The brother-in-law began to demand a smaller bribe. The shop chief explained the positive change simply: the brother-in-law needs an apartment. And the manager intended to utilize this incentive. I was surprised by the uniqueness of the fight against self-seeking and the contradictoriness of the methods of developing collective selflessness. It seems to me that both the manager and the brigade have fallen into a moral labyrinth from which it is difficult to find a way out. But the manager laughs at my doubts. He is convinced that he is capable of changing the collective nature.

Is it possible to dream about the impossible? The brigade of machine tool operators works under more stable conditions. Although here too there are overtime loads and days without work. But they do not receive a "bonus" for overtime work, and on days when there is no work they even agree to clean up the shop for reduced pay. "With our brigade one can reach the point of real communism," the brigade leader says with conviction.

The shop chief to whom I repeated these words smiles slightly: "It is simply that they have the highest wage rates. They are afraid that they will be taken away if they demand anything else." But one could hear a lack of assurance in his voice. As though he were ready to admit the idea that there existed in the brigade a natural selflessness. And he did not know how to deal with it. Previously this brigade too argued with the administration

about wage rates and emergency work. In order to change its nature, the shop managers replaced several brigade leaders. And the brigade quieted down. Nothing disturbs it, and they demand nothing.

They are having a small break. They are sitting down on the little benches facing one another. There is laughter, jokes, brief discussions. Something which has not been seen for a long time in many leading brigades. I pay attention to the fact that they are all approximately the same age, 27-35, and they even look alike: tall and manly.

Researchers no longer recommend that such small collectives of the same age be created. They assert that in these too much value is placed on informal relations. And friendship is valued in this brigade. Does friendship harm production? (A strange question, but appropriate after such a practical recommendation.) Friendship causes them from time to time to stop their machine tools in order to talk and laugh a bit. But it does not put into the shop a brigade leader who has been absent enough to make up a regular vacation. And it gets them going on days that are extremely busy, even when they do not have a chance to take a breather--without even looking at each other they feel their unity. Friendship becomes a high psychological barrier which does not allow them to accept rationalistic methods of brigade organization of labor. More stubbornly than others in the shop they reject the coefficient of labor participation and arrange their own "equalizing," repeating that they all work the same (although they all have different categories!). They do not understand how it is possible to take money for confidence in one another (and therefore they do not accept collective responsibility for discipline). They do not wish to merge with other brigades into an all-encompassing collective--in order not "to dissolve," to lose their independence and their stubborn character.... How is I did not find out about them at once!--after all, this brigade is similar to the heroic youth collective which hastened to fill the gaps and to work on the shock construction sites in the confidence that they would not be let down, and the first student construction detachments which without having developed a taste for the coefficient of labor participation unstintingly and confidently divided up their earnings equally. According to today's measures of brigade organization of labor this collective was incorrect.

And if there were an elderly or weak person working in this brigade?....

"I don't know if you would have lasted with us," the brigade leader had doubts. "The rhythm...."

"Our former brigade leader was elderly," recalled another worker. "And he was frequently ill. But we respected him--for his honesty. Even now we would be working together if it were not for the administration. They 'fired' him."

"And the chap who came to us after him did not work out. He was strong and healthy. But sly. He was able to create the appearance of working. He could not be educated and the coefficient of labor participation could not be introduced because of him. It was suggested that he leave. The next newcomer had been taken not 'off the streets,' but 'on recommendation' and the look for one of their own."

They sat facing one another, forming a friendly closed circle. They dreamed. Could they fulfill the annual plan in a half-year and earn a long vacation. They would all go to the country together and help the kolkhoz workers and recall their childhood (all of them were initially from the country)....

The shop chief listened to my discussion with eyes wide open.

"Now, that is impossible!" he said sharply. "What if suddenly a defect is discovered in a part--who will correct it? And how is it possible to fulfill a year's plan in a half-year?!"

"They know that this is impossible," I assured the shop chief. "They are simply dreaming...."

I added that it is necessary to dream for otherwise the impossible will never become possible. The manager looked at me in confusion, but believed that I was speaking seriously. He was convinced that there was a reason why he had his doubts about this brigade. The self-seekers are more comprehensible, and it is possible to control them with the ruble. But the dreamers are capable of doing something unexpected."

The unexpected was soon to happen. The brigade disappeared from the shop. Not for a half-year, but for 2 days. The manager became feverish at the site of the empty work positions.... On Monday the dreamers returned to the shop with blood donation certificates. Why did they need to do this? The supply of blank parts had dried up, there were empty days ahead when it would be necessary to look for something to do, and for giving blood they were let off work for 2 days. The brigade spent the first day together.... And now they intend to give blood regularly, once every 2-3 months. Thus they found a way of maintaining that vital balance in an unstable production. And another brigade which at one time could not be persuaded, is now going along with them to donate blood.

The chief of the unstable shop had encountered a typical situation. The workers liked to give blood. For this they received 2 days off with pay. According to the observations of production workers, they liked it even more when at the enterprises they began to limit administrative leaves and take strict measures for strengthening discipline. Some people used the blood donation certificate to cover up a hangover, others took time to go somewhere; we became convinced, that there were also other, less traditional uses. Many troubled managers seriously asked me: will a decree be adopted soon so that the donors can be let off only with the permission of the administration? But one administrator, without waiting for a decree, began to send the leaders of this noble movement into the most difficult emergency work--and the ranks of the donors in his shop began to thin out.... But such methods do not suit the chief of the unstable shops. Just try to "put pressure" on two brigades which only leave the shop on days when there is no work! And he gave in. But I felt that he would like to pound his fist and put a stop--to giving blood, to dreams and to friendships. To this manager perhaps all of this is beginning to seem like negative tendencies.



Can they drink tea together? There has appeared in the shop a new senior foreman about whom it is said that he has led the section out a slump by his demandingness alone. His demanding gaze immediately noticed unutilized reserves. Once a day the brigade of machine tool operators whom he was observing sat for 20 minutes at a table on which there was a 2-liter container of tea. The example of the self-seekers immediately came to the mind of the senior foreman: they also drank tea, and now they were taking turns smoking--and, according to the calculations of the manager, a cup of tea took 2 minutes. The brigade became stubborn. They were fulfilling the plan. And they did not want to be compared with that collective because it was not a very solid group. When the senior foreman began to insist, the brigade figured out the amount of time he spent smoking--an hour.

On days when there was emergency work, for the sake of speed, the senior foreman allowed the brigade to make parts in deviation from the technology, without preliminary thermal processing. The brigade leader refused: the instruments would quickly begin to malfunction as a result of this. The senior foreman demanded that they remain for overtime work. The brigade leader answered that the boys were tired. The senior foreman went to the shop chief. After a heated confrontation with the managers the brigade leader submitted his resignation from the shop at his own request, and when he asked about this they did not return his application to him. The shop chief valued his qualifications and experience but, like the senior foreman, they thought that the brigade leader had become too independent. But they were impressed by the question: "Why do you speak about the plan and units of output all the time? You do not ask how we are getting along, what we need. This guy (he nodded toward a chap from his brigade) needs an apartment. You say to us: work well and within a year you will receive an apartment. Then we would have something to work for...." The shop chief saw that the workers were waiting for an answer. "What are you saying?"--perplexed, he finally forced out these words.

The administration had removed so many brigade leaders already--but this was the first time the brigade had stood up for itself. They asked and then demanded that the "brigade leader be reinstated." They invited the shop chief to a workers' meeting. They went to the trade union organization and the shop party organization--but the chief ordered them also "not to compromise." They went to the plant committee of the trade union. Just when they reached the doors they shuddered and stopped....

I arrived when the brigade was having tea over the fence. Not far away, carefully keeping track of the time, the senior foreman was looking on. Relations with the workers had not worked out even with the new brigade leader, although this time the administration had chosen an obliging one. In the shop they called him "Boy"--a tall, narrow-shouldered somewhat clumsy person, with a simple childish face. But even Boy spoke disrespectfully to the senior foreman.

The brigade was drinking tea gloomily and silently. The collective tea-drinking continued more as a sign of protest than anything else. They became more lively when the former brigade leader appeared. He was strongly built with an emphatically confident bearing. He now worked in another shop, but



came here for tea. But the liveliness died out quickly, turning into phrases which meant nothing. The brigade leader left the shop where he had worked for 8 years and sat on a bench warmed by the sun. And I found out that even now (several months had passed already) the brigade leader was bothered by the question: why did they treat him this way? After all, he and his brigade were right! His voice quivered, but he still looked just as confident. Perhaps he could no longer work with this brigade, although he was not offended that they could not stand behind him until the end. But he would not return to the shop. The rhythm here is still tense, and it is time to start thinking about his health.

I had already encountered the taciturn brigade, from which the core had been removed, and that young, flourishing brigade leader who had started to think about his health. Now I have a better idea of how they bend and shatter this unyielding core--the character.

"You have broken the brigade," I said to the shop chief.

"But the administration could not have done anything else! We could not allow the brigade to feel that it was right, and not the manager!"

From all appearances, the shop chief does not accept the idea that even now the workers can feel that they are right. And they can feel their bitter uselessness. He actually did not understand that it was possible to have any other attitude toward a brigade that had come in conflict with the administration.

I wanted to know how this situation would be evaluated by the well-read former trade union organization who was introducing modern methods in the brigades. Unfortunately, I did not get a chance to see him again. I became acquainted with a new trade union organizer, a worker. He was an inexperienced and not yet involved in the introduction of methods. He knows of the brigade not from brochures, but because he works in it himself. When reminded of the conflicts between collectives at the administration which ended in "reselection" of brigade leaders, he became gloomy. "Now I have gotten over all that, but previously I could not have any peace.... How can that be: A person works honestly in a shop for 8-9 years and simply because he expresses his opinion.... But for those brigade leaders who 'left' the shop, perhaps everything is for the best. Yes, yes!"--he became bitter, having caught my surprised glance. "A regular worker can leave our shop only with a scandal. But if you yourself want to go for a good reason...they torment you with conversations, and work on your conscience. But perhaps I want to look for another kind of life!"

The trade union organizer fell silent, embarrassed by his involuntary "lashing out." And looking at me closely, directly with his blue eyes, he asked, with sadness and disturbance:

"Answer me anyway: Is man for production or is production for man?"

...I could not simply leave the shop this way. I went to the secretary of the plant party committee. The discussion about the conflicts did not bother

him. He discussed brigades practically: production can receive from them either a great advantage or a great amount of harm--when they become "collective self-seekers." I expressed my opinion that self-seeking can become forced.

The secretary of the party committee, surprised, raised his eyebrows:

"But the managers now have to work against violations. And the workers must understand that, if necessary, they must work overtime and come in on their days off. Without requiring additional payment."

I recalled the disturbed cry of the former brigade leader: "Both the senior foreman and the senior shop chief think that we must work overtime and on our days off! They used to at least ask us about this, but now they demand it!" This means that the secretary of the party committee and the manager of an unstable shop are prepared to consider the abnormal to be the norm. It is a pity that I did not ask him the question that was discussed at the conference on scientific organization of labor during the 1920's and which even today torments the inexperienced trade union organizer. Probably it would seem idle and frivolous to the experienced secretary.

I was unable to help the unstable shop; life there continued at its own pace. I looked in on them about 3 weeks later. There was much that was new. The demanding senior foreman, who was never able to eliminate the collective tea drinking and other deviations from his ideas about production life, took to drink and began to be absent. Willy-nilly the brigade of self-seekers, in spite of the supertense rhythm on the emergency days, failed to fulfill the plan for the first time. Because after the administrative measures for eliminating the self-seeking through reeducation, several mechanics left the brigade and people without the proper qualifications came to replace them. For the first time they reduced the wages of a newcomer here because of his poor work, and the equalizing amounted to nothing. Something similar happened in the brigade of Boy, where they also began to find out who was doing the worst work. The former trade union organization and the chief of the shop bureau of labor and wages began to appear here more frequently. To be sure, they did not speak about collective responsibility (obviously, the former trade union organizer had found the books which denied the progressiveness of this method). But he passionately publicized the coefficient of labor participation.

"You are all working the same? That cannot be!" The chief of the shop bureau of labor and wages persuaded the Boy's brigade. It is easier for some people to master complicated machines and more difficult for others. One can always find at least a small difference. And is it really fair if people still receive the same wages? You just watch one another!"

In the kindly eyes of Boy I saw confusion and struggle.

"And would you yourself like to receive wages according to the coefficient of labor participation?" I asked the chief of the BTZ later, when we were talking in his office. He smiled perplexedly:

"For myself I would prefer equal pay."

Why should I be surprised, after all it was not the first time I encountered the duality of positions of the organizers and the adjusters of brigade life! Why am I not happy about the successes in the introduction of crucial methods of brigade organization of labor? Here the introduction is more like an imposition. And therefore it passes most easily in those brigades where will and character have been crushed. The universal methods that are introduced seem to replace in these collectives the already eroded uniqueness of character and the departed (along with "equalization"?) friendship.

In the press, as a rule, negative opinions are expressed about equalization. The principle of payment according to the quantity and quality of expended labor is considered to be much more progressive and fair, and people are called upon to orient themselves toward this. In today's stage there is no doubt about this course. But does this mean that it should be carried out with blind uncompromisingness, that all brigades should now accept a unified form of distribution of wages? Is it necessary to categorically abolish equalization from the life of production collectives? Would it not be worthwhile to look more attentively at their experience without asserting beforehand that it can only be negative? They say that equalization does not provide incentives either for labor productivity or for increasing skills. And this is indeed the case. But still it is possible to have an atmosphere in which the desire to work conscientiously arises naturally and requires no additional stimulation. This is precisely the atmosphere that was in the brigades of a shop that was far from the leading one, one which had long held on to nonprogressive equalization and had rejected the coefficient of labor participation. Now there are fewer and fewer collectives like these.

Before leaving the shop I looked in on the brigade of dreamers which, as before, had firmly rejected the coefficient of labor participation. Previously it had been a special case, but lately it had become friendly with the brigade working next to it. That brigade also had equalization. But they had taken away the additional payment for overtime work. Had the dreamers grown friendly with the self-seekers? I decided to take a look at these dissimilar friends. Their taciturn brigade leader unexpectedly began to speak in a heated manner.

Before the organization of the brigade he was the "king of the polishers." He came to enjoy having a lot of money. But his health gave way. He agreed to enter a brigade. Now he could see that the shop managers "poured all of the production on the brigades" and had even stopped worrying about material and technical supply. They say: the worker is the master of production. But he, a brigade leader, did not wish to be such a master, who in search of new instruments was forced to run around the entire plant and finally go to the director. He wanted to know where the managers got the money to pay to the brigades for the emergency plan. "They should remember that the last time the brigade asked an outrageous price. And they gave it to us! All of it! We shall not agree to do any more emergency work like that. Not for any money! It is not that we have become tired. It is impossible to work that way. We want to work honorably...." Probably the shop administration and the secretary of the party committee would not like such a position and would see



in it primarily encroachment on the production plan. But it is being fulfilled at too high a price--the price of corrupting the collective. And the worker understood this before the shop managers did. A former self-seeker wanted to become a real, honest master of production. A master with a clear conscience.... These are quite appropriate friends for the dreamers!

I am frequently reminded of the unstable shop. Its managers for some reason did not wish to understand that it is precisely these bristly types, the ones with character, who should be the real developing collective, who in the future will be able to take over many of the functions of managing the enterprise. It is quite possible that the shop administration is not thinking about the future, that it is separated from it by the concerns of the day. And then this would explain the actively consumerist attitude toward brigades which I saw here. The administration is trying to make the brigades merely a "battering ram" for fulfillment of the plan, to weed out all the hitches and problems of the characters as well as the desire to independently solve certain problems of collective life. But administrative pressure gives rise to protest. If some are broken others will raise their heads and ask bold questions, think about tomorrow, and look for a way out of their moral labyrinth. It is with hope that I am reminded of the unstable shop.

#### In Search of a Coefficient of Fairness

The shop managers created this brigade of polishers in order to stabilize the production rhythm and smooth out the imperfections in norm setting. Half of the workers would not agree to enter the brigade. But they were put into it. The administration "elected" a brigade leader--not the one suggested by the workers, but another one: with lower qualifications, but a more severe nature. And the administration made it obligatory to apply the coefficient of labor participation. Within 2 months the shop managers were convinced that this brigade would soon be included among the leading ones. Labor productivity had started to increase, losses of time decreased, and in the brigade there was no longer any advantageous or disadvantageous work or conflicts about it either. To be sure, other disagreements arose--but the administration did not consider them worthy of constant attention.

I went up to one of the members of the promising brigade--an experienced, skilled polisher. And without stopping his machine tool he nervously expressed his attitude toward the creation of the brigade and the introduction of the coefficient of labor participation:

"I was in the hospital when all this was decided. I told the boys: with this coefficient of labor participation we will not be able to look at one another.... Never mind, we look. Only how! You try to stop yourself, but you see that somebody has been smoking too long, another person is talking with somebody, a third, although he is walking around his machine tool, is paying more attention to what else is going on. And at the same time you yourself are all thumbs. After work you would like to go to the movie or to the beach, but you have to sit on the couch trying to reduce your stress. At work we do not say anything to one another. And when we gather to have a drink...it turns out that we have started to remember such trivia about one another...."



Many production workers and organizers of brigade organization of labor call this acute critical attention to one another useful for the cause of mutual demandingness, and sociologists call it social control. The embarrassed worker called it "spying." For the sake of objectivity one must say that on no scale of the coefficient of labor participation is there the literal requirement--to account for the time expended by each member of the brigade for smoking cigarettes, over a glass of tea and so forth. But still the meter is turned on. Is this not because of the new sense of close monetary interdependency ("the boiler" is the same for all, but the money from it must be divided up equally; this means that if they pay you more, they will pay me less and so forth)? A familiar question has arisen in the brigade: "Who is processing whom?" Under these conditions--you remember?--it was difficult for an elderly person to work. Because of approximately the same atmosphere in one shop 20 years ago the shock collectives disintegrated....

I looked in on the brigade a month later. A polisher I knew said that things had become better. The stronger ones, including him, spoke sharply with those who were less strong--and they applied pressure. Another event took place: the coefficient of labor participation was used for punishment. A young worker had given blood in order to rest for 2 days. Because of the fact that he had not given any warning, the brigade leader "cut" 60 rubles from his earnings. The person who was punished was disturbed, but he did not go to complain. He did not feel confident--he was one of the weaker ones. The polisher whom I knew considered the punishment to be unfair, but his objection had already been absorbed. He had become accustomed to the coefficient of labor participation, and to the atmosphere which he previously could not accept.

The time of refusal to recognize the coefficient of labor participation and disputes about the expediency of its application in production collectives has passed. It is now considered almost a necessary element of brigade organization of labor (at one of the enterprises they even said that they had decided that as of 1 January brigades without the coefficient of labor participation would not be regarded as real brigades). But both the researchers and the production workers noted that it is not simple to make the coefficient of labor participation take hold and that personal relations will almost inevitably worsen. The crucial adaptation period reminds one of the fever after an inoculation. What is introduced along with the coefficient of labor participation; what is the nature of the social virus that is injected?

It has been noted that the coefficient of labor participation stimulates the growth of labor productivity and the strengthening of discipline, it was initially intended to do this, and it is precisely this effect that has brought out its recognition today. Attempts are being made to provide incentives for increasing skills with the help of the coefficient of labor participation. But I have encountered no research which has analyzed the moral and psychological effect, which are probably considered inessential and secondary. Or they are unquestionably positive. Thus it is frequently asserted that the coefficient of labor participation creates a healthy moral and psychological atmosphere. By this they mean that there is no labor turnover or violations of discipline. But this is rather an indicator that

the collective is meeting the socioeconomic demands that are placed on it. One cannot judge a healthy atmosphere without knowledge of how the people relate to one another, what they are striving for, what they accept and what they reject--all that which sociologists call motivations and values.

And at the same time in much research attempts are made to develop the ideal variant of the coefficient of labor participation with which it would be possible to evaluate not only the labor contribution, but also the social and moral-psychological manifestations. Then the coefficient of labor participation ceases to be simply an instrument for differentiated distribution of wages and makes claim to more. It attempts to give an evaluation of the worker as a whole. As one researcher put it, the coefficient of labor participation is becoming an index of the business and social reputation of the individual in the collective. It is suggested that the coefficient and wages be raised for assistance rendered to comrades, the manifestation of initiative, participation in public work, and so forth. Obviously, this expresses a desire for complete objectivity and fairness. But--a naive question!--can it be called comradely assistance when one is paid money for it. It will probably have the appearance it has in one brigade I know of. A young, highly skilled machine tool operator, having met his norm more rapidly than the rest, went up to the foreman and asked for more. The foreman gave him some of what the others had left--their wages were reduced correspondingly, and his increased. The workers called this comradely assistance self-seeking.

The suggestion to increase the coefficient for participation in public work is also surprising. What should be the criterion? The number of instructions and appearances at meetings? But that would stimulate a profanation, a degradation of public activity, which happens frequently anyway. Should one look deeper? This means to evaluate not formalized and set activities, but altruism, enthusiasm--but is it possible to pay for this? It is suggested that the coefficient of labor participation be used to give a ruble value to that which should not be subjected to this kind of evaluation.

True, I have seen such scales only in research work, and the organizers of brigade organization of labor and managers also have them sometimes. "From below," in the collective, they have not increased wages because of comradely assistance and public activity. They have not tried to transform the coefficient into the "index of the reputation" of an individual. On the contrary, they have cut back and simplified the scale, and even changed the principles of its effect. The brigades have adapted to the situation--and they have also adapted the coefficient of labor participation.

I know of a brigade of carpenters which, after the first confusion that followed the introduction of the coefficient of labor participation, decided to "remove the tension." The workers sat together for several evenings and developed their own operational norms--they were somewhat higher than those that existed before the introduction of the coefficient of labor participation.

"Now they all look not at how their neighbor is working, but only at their own norm, and we take note of its fulfillment each day. It is freer this way: It

is possible to do less today and make up for it tomorrow." Previously the coefficients were set on the basis of the remarks of the brigade leader and now they are calculated according to the fulfillment of the norms. They can be reduced only for absences and poor-quality work. The effect of the coefficient of labor participation has not only been eased (as a result of the curtailment of mutual control), but it was also limited. Now the coefficient of the labor participation is "standing at the sidelines"--and is used only when there are sharp deviations from the norms for labor and discipline. The researchers and organizers of brigade organization of labor would hardly call such compromising experience advanced.

Unfortunately, I have not had occasion to become familiar with truly advanced experience in the application of the coefficient of labor participation, although several model variants have been recommended. But with closer consideration the models acquired unexpected outlines.

Concerning this shop they said: "Previously it did not fulfill the plan, labor turnover was the highest in the plant, and the personnel division was constantly sending people there. But a new shop chief and chief of the bureau of labor and wages arrived, and they relied on brigades; they consolidated them, created all-encompassing ones, and introduced the coefficient of labor participation. Since that time the shop has not been suffering so much from labor turnover and it has been fulfilling the plan." The chief of the bureau of labor and wages noted that the coefficient of labor participation helps to form highly aware collectives. He was perplexed by my desire to meet them, but he politely allowed: "Go ahead, we have no secrets."

But there were secrets. All of the modern signs (an all-encompassing brigade, a unified contract, coefficient of labor participation) both existed and did not exist. Small brigades worked individually and did not feel that they were in a unified all-encompassing collective. Each press operator keeps track only of his own work throughout the entire shift, that is, the prepared parts that come from the press. The brigade leaders register the pieces and the sets of eight in the report and submit it to the bureau of labor and wages. This is all there is to the self-management functions of the highly conscious collectives. Everything else is done by the bureau of labor and wages; it combines several brigades on a unified order, and calculates the wages according to the pieces. And then after that, from the wages, they calculate the coefficient of labor participation, which is transformed into a decimal number although nobody knows why. Yet everything is understandable. This is not a passion for mystification, but a special sensitivity of the position. The apparent effects are intended for the inspected. And they say that there is no point in having the brigades themselves waste valuable time on the coefficient of labor participation and other fashionable extras. And there is no time. The introduction of the brigade in the shop went hand in hand with mechanization, which was intended to make things easier, and not to increase labor productivity. People and machines were joined together into synchronously operating technological chains. The rhythm was set by the machines. The presses rumbled heavily, and the carousel of chain conveyors rotated....



I mentioned the advanced brigade in which it was difficult for the elderly worker to the brigade leader, who was only able to break away from the technological cycle for a couple of minutes. The brigade leader listened without emotion and then wiped the sweat off his forehead.

"We do not need such people either," he said. "They throw the entire brigade off. And if one fails, they all stop."

"But what if this was a person to whom they had become accustomed after many years of working together?..."

"We do not become accustomed to people," the brigade leader laughed.

Such heights had been reached by mutual demandingness and smoothness in the shop, where advanced methods were applied in a very unique way and everything possible was done to transform the brigades only in the technological sense.

But who then should set the coefficients of labor participation? In the opinion of the majority of researchers, the council of the brigade or even the entire brigade if it is not large. The brigade leader makes a suggestion, the workers discuss it and then they vote. The administration can intervene only if a conflict has arisen--but even then the possibilities of its intervention in the "internal affairs" of the collective should be limited.

Unfortunately, we have encountered quite a few brigades where the coefficient of labor participation has been determined collectively. Most frequently the procedure was controlled by a strong personality.

A new person appeared in one brigade, an intelligent person with a smooth tongue. He convinced the brigade leader that it was incorrect to divide the wages up equally, that it was necessary to apply the coefficient. And he applied it--higher for himself than for others. To those who were dissatisfied he explained that throughout the month they had had small violations, and for this their wages had been cut. Arguments broke out in the previously friendly collective--right down to fighting. Absenteeism and other significant production misconduct were not a problem with these chaps. But the extra few minutes taken during smoke breaks, drinking tea and other trivia had not been noticed by anyone before. But now--why were they keeping track? They were all shaken by the possibility that there existed within the brigade a memory which would forgive nothing--the memory of a meter.... In the end the brigade suggested that the "innovator" leave and it returned to equalized wages. They did not even explain: did he really pedantically (honestly?) keep track of these tiny faults. This was probably not so important for them. But it seemed remarkable to me that here there was a clearly expressed possibility of manipulation and deceit with the help of the coefficient of labor participation. After all it is really easy to falsify the desire for this kind of precision, when they begin to take into account trivia which we usually forgive, which we do not remember in our daily life. And then the abstract coefficient can be transformed into a dangerous weapon.

In this tragicomic story there is clearly manifested also an effect of social and moral disorientation which is typical of the introduction of the



coefficient of labor participation. The collective loses its balance. It ceases to distinguish good from evil. Moral concepts lose their immediacy and previous feelings are deadened by the bewitching ticking of the meter. There is a restructuring of attitudes and a revaluation of values. And after this disorientation is it not possible to have a reorientation whereby the people no longer find it comical or impossible to increase wages for comradely assistance and for speaking at meetings, whereby all moral and spiritual qualities can be regarded only from the standpoint of their production suitability? But then what happens to sensitivity, kindness, honor, selflessness and human dignity, which can far from always provide a clear-cut increase in labor productivity?

At one large enterprise the coefficient of labor participation was introduced in all the brigades. For publicity they had the coefficients displayed on the "screens of the competition." But having checked the "screens" a worker from the labor division saw that in many brigades the coefficient of labor participation "amounted to equalizing": everyone was given a 1. "But perhaps it is worthwhile thinking about this leveling?"--I asked. "It would be worthwhile if all of them were leveling. But there are also good collectives which assign various coefficients. And yet the workers are indifferent to the coefficient of labor participation and sometimes even tear down the 'screens' with reduced coefficients."

I had been convinced many times that the workers were indifferent to the coefficient of labor participation--but now I asked myself the question for the first time: why is it thought that this indifference speaks in favor of the coefficient of labor participation? I could not forget the words from a letter which came into the editorial staff a long time ago: "Because of this coefficient of labor participation we came to hate one another." A phrase I heard recently from a worker burst into my memory: "The coefficient of labor participation takes a great toll--and not only from the pocket, but also from the soul." If this is so, with the increased publicity reflected on the "screen" it is even more painful.

I visited one of the brigades where they had set differentiated coefficients. The senior foreman usually set them and filled in the "screen," but now during his vacation this was done by a deputy with a higher education. He said that were it not for the publicity, the workers of this section would not react at all to the coefficient of labor participation, which applies only to a small bonus. Having seen the coefficient of labor participation on the "screen," the people who were punished laughed, demonstrating their indifference and disdain. But then the "screen" disappeared, or the reduced coefficient was corrected to 1. When the order came out to rewrite it and to post the "screen" again, the deputy moved it to the office of the foreman. The publicity was not limited--and the "screen" was intact.

I spoke with the young worker whose coefficient of labor participation was frequently reduced. I asked him why. "They have reduced it every time!"--he glanced at me and then immediately lowered his eyes. He uttered a couple of phrases about how he works normally, the collective is normal, the senior foreman is normal.... A quiet, heated shout: "But nobody will tell you the truth! I have been here a year and I do not speak with them and I do not wish

to become friends with anyone! You cannot become friends with the people you work with! In a week they will start to hate you! I have friends outside, and they are useful to me and I to them...." "But do you have real friends because they are useful to you?" "I have never heard of that."

The deputy came into the office and asked a worker to run to another section to find something out. The latter jumped with haste to oblige. "That is the coefficient of labor participation and action," the deputy noted with satisfaction. "Previously he would have said that he was a mechanic and not a courier. Performance has become higher." In my ears still rang the painful cry which brought back memories of the polisher who was adapting to the coefficient of labor participation, the confused former champion in the brigade of strong leaders, and all the other young and elderly, strong and weak, people who at one time had lost their balance and support and felt their vulnerability and solitude among people. But the deputy expressed his regret that the "range of effect" of the coefficient of labor participation was too small. In another shop in another plant there is a mechanics service where the coefficient is in operation at full force....

I was lucky: the managers of the mechanic service of which I was speaking came into the office--they visit here frequently and I began to become familiar with the experience in utilizing the coefficient of labor participation "at full force."

Yes, the scope was there! The coefficient of labor participation is used to distribute not 20-30 rubles in bonuses, but all of the wages. There is, to be sure, a guaranteed minimum--a little less than the wage rate. The managers were complaining that they could not reduce the wages to zero. But they intend to expand the range between the minimum and the maximum from 100 to 200 rubles.

"The coefficient of labor participation," the mechanic formulated boldly, "is a lever in the hands of the mechanic and foreman."

"They are going too far!" the deputy, dazzled by the breadth of the range, sighed enviously.

But I, on my guard, asked what the managers wanted to turn the collective toward with the help of the "lever." Previously in the mechanics service there was disorder, absenteeism and drunkenness. Having applied the coefficient of labor participation, the managers had already achieved some progress. The absences and the drunkenness had almost disappeared. "The workers have become more obedient" (again a dangerous phrase! Where does advanced experience end and excess begin?) Now the mechanic wants to use the coefficient of labor participation to drive out all the idlers, that is, those who neither drink nor are absent, and they do work--but they are weaker than the rest. "I will give them the minimum a couple of times and they will leave of their own accord." He was obviously not interested in the question of the physical capabilities of the "idler." Moreover he was firmly convinced that others would come to take their place (and he was not wrong. A couple of days later, when I looked in on the mechanics service, I met the deputy with whom I

had been acquainted, who had calculated that in a work position here it was possible to obtain 90 rubles more).

It is not difficult to guess that in the mechanics service the coefficient of labor participation is determined--in spite of scientific recommendations!--by the administration, and not by the brigade councils. I learned one more impressive detail: There are neither councils nor brigades here. They were created, but they disintegrated and now the mechanics work, as before, in twos and threes. The managers call these groups of two and three brigades, although they themselves would not consider them to be brigades. There are no brigades, but the coefficient of labor participation is in effect at full force. Such metamorphoses of progressive methods sometimes take place!

"A worker should always be only a performer! The word of the manager should be law for him. The foreman said: the word 'lumin' cannot be changed into 'aluminum.' The chief is always right."

The mechanic, a narrow-shouldered, well-built boy in jeans, had laid out his credo. There was no equivocation and no doubts in his mind. These are the firm hands that can hold the lever of the coefficient of labor participation and guide the production ship--where? To what shores?

I was bothered by these transformations of the coefficient of labor participation and advanced experience with these extremely significant exaggerations. Too often incentives are a stick with a pointed end which, according to science, should be held by the collective but ends up in the hands of cruel managers. And that is when they operate sharply, at full force! With the help of the coefficient they begin to direct not only production affairs, but characters, destinies, relations and moral principles. Everything is easily entered into the formula "The struggle for strengthening discipline." The discipline of obedience, about which A. S. Makarenko said that it is sometimes the most convenient, but not the most progressive kind.

The last experience I saw in the utilization of the coefficient of labor participation took place in an unstable shop which reminded me of the one I discussed in the preceding chapter. Here the foreman-brigade leader with a lot of initiative "brought his brigade up to date": he achieved interreplaceability of certain occupations and introduced the coefficient. He was dissatisfied with one thing: "There are still demagogues in the brigade." Those who are bothered by constant emergencies. The manager had already punished one of them--he calmly explained to me that he had reduced his wages sharply for a forgivable omission (and the council which was supposed to establish the coefficients for itself had given in). But it was impossible to punish a second person. He was disabled; here in the shop he had lost his hand and had been transferred to a brigade where he could do the work. During the shift he would do his work irreproachably, but he would not do overtime work or do emergency work on his days off. The coefficient of labor participation did not pertain to him: the payment which he received in addition to his pension was lower than the minimum wage. "Why is he so confident and calm?!" The foreman-brigade leader was indignant. "No, I do not understand him, but I will find out. He does not come to work drunk, but sometimes he has liquor on his breath." Here he ruled out a strategy which



would require him to wait for a long time. He intended to get the brigade council to agree immediately to remove the "demagogue" from the collective.

I was introduced to the "demagogue"--his economy of words and independent confidence, which so irritated the manager, evoked sympathy and respect in me. The workers with whom I spoke also respected him. They had guessed the plans of the foreman-brigade leader. "His hopes are in vain, the council will never agree to that."

But the shop chief intended to help the foreman-brigade leader with all the initiative. In order to improve the atmosphere he intended to transfer both "demagogues" to other brigades without consulting with the council.

"And if they do not agree?" I asked. "Perhaps they are attached to the collective, to the place?"...

"We will convince them," in the shop chief's voice I could hear that metallic inflexibility which was already familiar to me.

Had not the moral compass on this production ship become demagnetized? The struggle for improving the atmosphere had become administrative arbitrariness, and natural demands were called demagogy. And with the abstract coefficient, the dispassionate meter of justice, here they are creating something bad--sometimes it gets excited and starts to speed up, and sometimes it goes into reverse and is prepared to show a "minus" where there is an indisputable "plus".... The petty swindling of the adventurer who is establishing himself in the brigade with the help of the coefficient of labor participation pales in comparison to such perversions of advanced practice.

When determining the coefficient of labor participation there are frequent cases of imprecision and subjectivism, and many contradictions arise--write theoreticians and practitioners. It is difficult not to agree with them. Some people think that even if the coefficients were established collectively, by democratic voting, there is still no guarantee that the individual contributions would be determined precisely. Someone could be punished too severely while someone else is spared. Is it possible to avoid subjectivism and contradictions and imprecision? The researcher suggests putting our trust in...computers. The machine already plays chess, takes exams for students and calculates wages--why not take one more step and let it calculate the individual labor contributions, and at the same time also the "indices of the reputation" of the individual in the collective? The machine will not exaggerate, it will not lie and it will not spare anybody; it will calculate with a precision right down to microscopic amounts. Logical! And symbolic. This means that we wish to give the machine the decisive vote; it will establish justice in the collective. How have our minds come to the point of such fantastic prospects? We come to this conclusion when we identify justice with dispassionate precision and when we make the meter the symbol of justice in the collectives.

I saw the triumph of mathematical, machine justice. In completing the ascent from the collectives where the coefficient of labor participation was truncated and limited, where it was difficult to get used to it, to those



collectives in which it, controlled by a powerful hand, worked at full force, I went also to the brigade of repair workers where they use a lever more powerful than the coefficient of labor participation. The lever was controlled by a creative individual who could successfully replace the computer. The senior foreman introduced his system in the brigades under his jurisdiction 9 years ago--and up to this point the startling social experiment is shrouded in mystery. The shop managers do not know about it, only the chief of the bureau of labor and wages had overheard something about it. From her I also found out about an enthusiast who was involved in the calculations.

The workers began to acquaint me with the experimental system. "For us all life is entered according to points." "During a day we must earn no less than 8 points." "If there is no work, we still have to find some way to gather points. We pick up a broom or mop the floor. If it has been mopped--we mop it again...."

I leafed through the journals in which they described their work down to the smallest detail. It is not simple: repaired and assembled a piece of equipment. And how many shafts, nuts and screws were changed in doing this, how many bolts were tightened, each detail operation was given an evaluation and points, and then the individual was given his total evaluation for the work day. After each total was a summary signed with a sprawling signature. One of the entries: "This person paid no attention to what he was doing. One should not joke with him."

By studying the notes I gradually entered into their life. "But why did they give 3 points for washing the floors one time and on another occasion they gave 6 points?"--"Does this mean that they measured the square meters." They do not joke.

The senior foreman appeared. He was unhappy that the secret of the experiment had been divulged. But he was prepared to answer questions. He had devised the system in response to an order from the plant director concerning the need for setting norms for repair work. He sought and combined ideas of microelement norm setting, the point system of evaluation when summing up the results of competition and the principles of the coefficient of labor participation. The points do not affect the earnings. The system has a different purpose--"to enliven competition." Twice a month the senior foreman makes the evaluations public, emphasizing the differences in them. And because of the precise calculations, this difference is always great.

The workers with whom I spoke hate the points--but they are eager to gather more of them. Their labor has lost its previous content--or, rather, it has acquired new content. They do not screw a screw or repair a shed, but they gather points and this interest convinces the creator of the system that he has done the right thing.

He takes from the safe a notebook with the inscription "Handle With Care!" He smiles: "I keep this under lock and key because some people would be very happy to destroy it." This is the price list. It indicates the price in points for everything that is done. It is the fruit of a gigantic amount of labor: the senior foreman has repeatedly corrected the evaluations, bringing

them close to complete objectivity. He thinks it is necessary to increase the number of indicators that are taken into account, and to try, as much as possible, to evaluate each movement. "For even a bolt is tightened in various ways. One can be tightened with one's fingers while another requires a wrench. Is it really fair for them to be given the same evaluation?...."

"But what kind of ideal justice do you want! Do you want to completely eliminate the random, luck...."

The senior foreman takes my amazement as enthusiastic approval. Deeply touched, he reveals the weak spot of the experiment to me. For some reason the system which strives for ideal justice provokes...writeups (this is not because the competition has become too "lively?") And so in order to gain more points they include an extra screw or bolt, and sometimes more expensive parts. Recently I established the guilt of a worker about whom I never had any doubts.

The manager stepped up control. He keeps an immense archive--a stack of full journals. He arranges selective inspections--he takes apart an assembled machine and checks to make sure that all of the bolts that have been signed for are screwed on. ("So as not to cause injury, I do this on the sly.")

"And have you yourself ever worked under such normed, monitored conditions?"

The experimenter thought for a while.

"No, I would prefer nonnormed, free creative conditions. But it is necessary to keep in mind the various levels of awareness...."

Judging from everything, he had no doubt about his own superiority over the "masses," just as there was no doubt in the minds of those managers who boldly take into their own hands the lever of the coefficient of labor participation. Probably this feeling helps them very much in creating or thus remaking incentives, systems and schemes, so that they are able to reduce other people to the level of functioning crews.

What I saw seemed to be a delusion. But the managers of the shop whom I told about the impressive experiment, although they were surprised, were not really alarmed: "Perhaps he is right. After all, the result is the important thing. And this section operates without interruption."

Probably the senior foreman even now is continuing his inspired work for reducing justice to the absurd. And somewhere, perhaps, they are already prepared to calculate the coefficients on computers. The meter is ticking louder and louder. It is terrible both when it is choked up and used by cruel hands for falsehood and when it trivially, inhumanly precise. It can be translated into points, kopecks, rubles, each act, gesture and living movement, an impulse or even a feeling; it would like to measure everything, to evaluate the invaluable.... Stop, turn off the meter! And yet in one of the Central Asian republics, in spite of all modern tendencies, the brigade is giving the highest coefficients...to fathers with many children. I was glad when I read about this in the paper. There are still such imprecise people!

## Beyond Good and Evil

The readers will probably recall how brightly the active role of the council of brigade leaders was depicted in the book "The Kaluga Variant." The director of the Kaluga Turbine Plant said that at this enterprise they had begun to organize brigades out of utilitarian considerations (in order to increase labor productivity and strengthen discipline), but then "they went further," having sensed in the brigades not only a form of labor organization, but also a form of self-management. The brigade leaders and the councils depicted in the essay, obviously, felt that they were masters of production--and not the kind of masters who, because of poor supply, were forced to go themselves throughout the plant looking for parts and instruments that were in short supply, but those who could make a responsible decision which influences the destiny of the collective.

At the enterprises where I had occasion to visit there was no such council. At one of them they had already replaced quite a few chairmen, but the work had still not been arranged. I asked: "And what, in your opinion, should it be?" One of the previous chairmen, a former public worker, answered indefinitely that the council should conduct and organize various measures (he had not thought about their purpose). He considered the main reason for the failures to be the fact that there were no incentives for the activity of the council.

"One brigade leader, a member of the council, complained to me: 'I have been at the plant for 7 years and I have only a room with a neighbor.' I told him that I would not put in a request for him at that time, that it was too early, but after a year, when the work of the council was already apparent, we would ask them to assign him an apartment and various items that were in short supply. I 'tossed out' this idea to the chairman of the plant committee. 'Since when are you the boss!'--'But I am not asking now, I am just giving a hint for the future.' 'No, we do not need such a council.' Do not look at me like a self-seeker! I personally do not need anything, after 20 years working in the shop my turn to be first in line for items in short supply have already passed. But I know that incentives are needed for public affairs, the workers will not start going to meetings after their shift simply to be there. And my boys have become tired of going to meetings."

The current chairman did not understand about additional incentives, but he was categorical about the purpose of the council. "One more place to talk."

In the other three plants they began to appoint to the councils not only brigade leaders, but also managers of shops, divisions and even deputy directors. At two of the enterprises these councils were headed by brigade leaders, and at the third one they went further and appointed as chairman a specialist from the division of labor who handled the organization of brigades.

"We tried to create a purely workers' council," said the managers of the division. "But nothing happened. Then in keeping with branch recommendations



we decided to include engineering and technical personnel and the administration in it. Now the meetings take place normally."

Is the activity of the current council not maintained because it is easier to force managers and engineering and technical specialists to participate in public measures?

"They are the ones who attend all the meetings. And it is most frequently the brigade leaders who fail to show up," admits the chairman of the council. "Frequently even those who are scheduled to speak do not come. But we do not council the meeting. We have found a way out. The party has permitted us to hear the shop chiefs instead of the brigade leaders if the latter are absent."

An inventive solution! It logical leads to a situation where the meetings of the council of brigade leaders can be conducted without brigade leaders.

"We understand that this council of brigade leaders is...artificial," reflects the engineer who is the chairman of the council. "We decided that we would try to put it into operation this way, and later, perhaps, we would make it real. We would begin by putting in charge of the council not an engineer but a worker. I went to one brigade leader and started to talk to him and bring him literature. At first he was interested, but recently he flatly refused to become the chairman of the council. He said that a highly educated specialist is needed there, and that he understood nothing about that, that he had no time, that he was a piece-rate worker, and after work he had rabbits and a dacha to go to. There was something about the admission...perhaps this is why we will never have a council made up purely of workers," presumed the engineer.

The rabbits and the dacha which are preferred over the meetings, just as the expectation of additional payments for participation in the council do not really show a low level of awareness. This is more likely to mean that the workers and brigade leaders do not see the point of the activity of the councils. What is so surprising about that? Those "real" councils with which I became acquainted actually were turned into places for more talk and they made no decisions at their poorly attended and irregular meetings, or else they were purely formal decisions which did not have to be carried out. The "artificial" councils functioned more efficiently, according to a plan set by the organizers of brigade organization of labor and specialists of the division of labor. The plans were not sparkling with diversity or urgency. They included reports from brigade leaders concerning fulfillment of production plans, from chairmen of shop councils concerning the introduction of brigade forms, and so forth. To make them more lively they included "informal measures": for example, "family recreation of brigade leaders." Can this work be enlivened by strained intimacy? It was as though there were no crucial, immediate problems in the collectives! What is remarkable is that when the manager of a brigade of communist labor who ended up in the blind alley of intensification thought about whom to turn to for help, the plant council of brigade leaders did not even come to mind. Even though she was a member herself. This alone says a good deal about the role and significance of the "artificial council" which could not become an organ of the workers' self-management, but became only a formal appendage of the divisions of labor,



of the bureaus and groups that are a part of its structure who engage in the organization of brigade labor. The hopes of creating a real agency out of an artificial one were naive, for in life there are no examples of such transformations. And real councils could hardly appear in places where they did not go beyond narrow utilitarian attitudes toward the brigades and looked on them only as an instrument for solving production problems, where the collectives were not allowed to make responsible decisions independently, where methods of distributing wages and forms of interrelations were imposed on them, and where they tried to determine their paths of development for them.

Many specialists of enterprises, scientists and practical workers now participate in one way or another in brigade forms of labor organization. Which ones of them look into the contradictions that arise and are concerned about the destinies of brigades which have ended up in a blind alley and collectives with deformed characters and interrelations? Who wants to respond and help immediately, today, without waiting for orders and instructions?

Among the organizers of brigade labor I found no people who were ready to take on such a mission. Some of them ended up in this work because of circumstances but felt no interest in it. Others began to be interested in intrabrigade conflicts--but did not have the time to delve into them and think them through to the end.... This is not possible because of the references and reports on brigade organization of labor, more and more of which are being demanded from everywhere (and they all want to know how much labor productivity has increased in the brigades, how discipline has become stronger and so forth). I mentioned above two more of the most clearly expressed characteristics of organizers. The specialist who has clothed himself in reading as though it were armor: to all questions concerning complicated conflicts he answers firmly in erudite phrases that are clipped because of frequent use; using formulas from books he veils any contradictions, and turns real situations into bookish formulas--and anything that is superfluous, that does not fit in with the bed of procrustes of the scheme, he is prepared to eliminate from life. A person with an ambiguous position: he deeply feels the contradictions of brigade organization of labor and has his own opinion about them--but for the time being he is ready to step over this. He uses the soul with a passionate monologue to somebody in solitude and with an easier soul he goes further--in spite of himself, according to instructions and the scheme.

Perhaps my journalist colleagues?... In the plant newspaper I read a notice about how a brigade with which I am familiar is increasing labor productivity and strengthening discipline--and there was nothing about its compulsory self-seeking. I found an article about the production successes of another brigade--and nothing about how the administration had removed the brigade leader and broken the character of the collective. "Our goal is propaganda and advertising of collective forms of labor organization," said the editor. Does this kind of propaganda achieve this goal?--after all, the plant workers can see the difference between reality and what is in the newspapers. In another plant newspaper I found out about a young journalist who had begun to "dig into" the problems of brigade organization of labor. She did not get as far as the moral labyrinth, but published several articles with an analysis of

the reasons for the ineffective utilization of progressive methods at the plant; a cycle of television programs was prepared on the basis of this. The managers of the enterprise encourage her.... With a reprimand "for violation of job discipline."

The plant sociologist. These are the people who should see the deep contradictions and sometimes stop the administration and the organizers. But they did not do any in-depth investigation in brigades at a single one of the enterprises encountered. The sociologists were given other problems: to explain the shop was not fulfilling the plan, what was the reason for the unsatisfactory product quality, and so forth.

I spoke with a sociologist who had come to the plant from the scientific research institute. I discussed the brigade in which it was difficult for the elderly and the weak. He listened without interest. For him this was an ordinary situation. Like many other production workers with whom I had spoken previously, he advised introducing that form of the coefficient of labor participation in which the main criterion is labor productivity. "Perhaps other problems will appear, but the current one will disappear. The elderly worker will be paid less than what he is now earning."

"But is that a good thing," I asked a rhetorical question, "that the young and strong practically and mercilessly evaluate an elderly person who has given the plant dozens of years and has trained other workers? The coefficient of labor participation will only dispassionately establish his physical capabilities of today. Is this fair?"

The person who had come from the scientific research institute at how hot under the collar I was. He said that I was descending to the level of ordinary awareness, emotional evaluations and judgments. If sociology is ever interested in this level it is only for a complete awareness of the object of control.

The conversation died out--we were speaking in two different languages. He was thinking more abstractly--and therefore was able to calmly consider the moral labyrinth into which one must draw the individual and the collective in production, where "everything is subject to the function." He dialectically noted that in the brigades it is time to arrange friendly, kindly interrelations. As an example he gave a brigade of communist labor with which I was familiar. I told him about the present atmosphere in it. About the work at the limit," which undermines relations. Could the sociologist not help and disclose this problem?...

"They have begun to engage in psychophysiological research on the limits of intensification in certain scientific research institutes, and I myself have participated in this.... But at the plant such research is impossible."

"The limited nature of the load in this brigade can be seen even with an elementary time and motion study of the work day!"

The sociologist laughed:

"You want me to immediately drop everything I am doing and delve into this?! There are hundreds of brigades in our enterprise, and this is only a particular instance...."

He was right, of course--scientifically and objectively. And my agitated everyday awareness could not fit in which his correct, calculating, analytical nature. A particular case does not cause him to lose his emotional balance. He will observe the process, and accumulate and classify facts for discussions and recommendations, purged, removed from doubt, confusion and emotional coloring.

I encountered an impressive example of such recommendations recently in a book where an opinion was expressed concerning the possibilities of further development of brigades. The authors (out of considerations of delicacy I will not give their names) gave concrete proposals of how the individual can develop harmoniously in the collective. They recommend that all workers write "personal plans for social development." They were to indicate the projected event-measures in their personal and family life. It was suggested that the plans be discussed (or, more precisely--"defended") at meetings. The most intimate events would not have to be publicized extensively. At the request of the collective and the administration the harmoniously developing individual could (or should?) replace one projected event-measure with another. Each plan should be printed in three copies: for the individual, the administration and the public organizations (obviously, to monitor its fulfillment).

For some reason this routine bureaucratic concern for the development of the individual, like something taken from a fantasy novel, is similar to the mathematical searches for fairness which I discussed in the preceding chapter, the attempts to stimulate public activity, fraternal assistance and other manifestations that are close to the soul. For those researchers who have soared above the level of ordinary awareness, who have abstracted their scientific research from concepts of good and evil, probably, emotional and moral sensitivity is probably as dulled as it is in those many production workers who, acting according to similar recommendations and constructions, organize and reeducate brigades.

"Where is the author leading us?" the businesslike reader may ask with surprise. "What kind of moral and emotional sensitivity is required in brigade organization of labor? How is it introduced and what could be the advantage from it? The position of the author of this essay is strange to say the least. Instead of a serious analysis of the causes for the slowing up of the growth rates of labor productivity in the brigades she is speaking about some offended elderly individual, and draws attention to her dislike of sick lists, the age of those who are working with less return, and other such trivia. What moral issues can there be in economics, where the main thing is the final result?

But the destiny of certain brigades which have ended up in the blind alley of intensification and in the moral labyrinth proves that the economy cannot develop when it is alienated from common human values and common human morality. It should not have a special ethic with which cruelty is forgiven

more easily than a moment of tardiness. A sober economic calculation should not crowd selflessness and spiritual nobility of the life of production collectives. One must not forget that production was created by man and for man, and to lose sight of "every day" primary human concepts of good, evil and justice, or allow a demagnetization of the ideological-moral compass on the production ship. And to make sure of this it is necessary to measure daily production affairs with high points of reference. It is necessary to give a moral evaluation to methods of labor organization and to compare with principles of morality, regardless of how paradoxical it may sound, the course toward mechanization, the line toward norm setting, and the overall strategy of intensification. Who will now take up these naive, essential moral searches in production life? Who will extend not a rigid, but a friendly hand to brigades that have ended up at the crossroads and help them to come out of the blind alleys and labyrinths? I did not find such a person among those with whom I had occasion to speak at the enterprises.

But somewhere there must be such a person.

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## BOOK ON ECONOMIC GROWTH REVIEWED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 8, Aug 85 pp 200-208

[Review by S. S. Shatalin, corresponding member of the USSR Academy of Sciences, All-Union Scientific Research Institute of System Research of the State Committee for Science and Technology and the USSR Academy of Sciences (Moscow) of the book by K. I. Mikulskiy "Ekonomicheskiy rost pri sotsializme" [Economic Growth Under Socialism], Moscow, "Nauka," 1983]

[Text] The book by K. I. Mikulskiy, "Ekonomicheskiy rost pri sotsializme" (Moscow, "Nauka", 1983) is undoubtedly an important phenomenon in Soviet economic literature. It raises and discusses the pressing problems of socioeconomic development in the modern stage and in the foreseeable future. The very subject of the monograph attracts the interest of both practical workers and theoreticians who are working with problems of political economics and national economic planning. The more so since the book is written on a high theoretical and methodological level, using rich materials concerning the development of the economies of our country and the fraternal socialist countries.

### A Typology of Socialist Reproduction

In economic science and practice the awareness is becoming stronger than further advancement of the national economy requires profound and comprehensive changes in all of its sectors and at all levels. There is an increasing need for generalizing research which would make it possible to view the economy as a system, to disclose the conditions for effectiveness of the policy under the new conditions, and to single out the vitally important prerequisites and directions for socioeconomic progress. K. I. Mikulskiy's book makes its contribution to the solution to this cardinal problem.

In order to give a noncontradictory evaluation to the diverse problems of modern economic life it is necessary to have a system of objective criteria. The author does not, as is widely done, reduce the term "type of production" to the measure of intensification of economic growth, guided by another capacious and complex concept. In the book the type of production is defined as the "totality of essential and stable features of the process of reproduction which reflect the special function of reproduction (embracing in

its unity both the economic and social effect) which is adequate to each given stage of the historical development of a particular social formation and also the social conditions and economic system for the utilization of the society's resources which are necessary for its fulfillment" (p 77). This definition draws attention to a complex of features which comprise the basic content of the process of reproduction; it shows which set of indicators is necessary for any complete description of this process, it notes the organic interconnectedness of these features, it elucidates the historical position of the reproduction process, and so forth. It would seem that such an approach is not only justified methodologically, but also has a certain practical significance. In the first place, it orients us toward disclosing the features of reproduction which are inseparably related to intensification, which is also a prerequisite for it. In the second place, it shows that intensification is not a goal in itself; the orientation toward intensification asserts a particular social goal of economic development to which intensification is also subordinate. Thus the concept of "type of reproduction" serves as a unique kind of prism through which one can consider socioeconomic life.

The book puts forth the hypothesis that three types of reproduction that sequentially replace one another are inherent in the first phase of communism. Historically the first type, which has already receded into the past, is characterized not only by the predominance of extensive sources of economic growth, but also by the corresponding model of the connection between production and consumption, specific structure priorities and so forth. The second type of reproduction which is being formed before our very eyes is distinguished by an increased return from production for consumption, the predominance of intensive factors, the harmonizing of the structure of the economy, comprehensiveness of the national economy, acceleration of scientific and technical progress, and so forth.

As M. S. Gorbachev pointed out in a report at the all-union scientific-practical conference entitled "Improvement of Developed Socialism and Ideological Party Work in Light of the Decisions of the June (1983) Plenum of the CPSU Central Committee," the course toward intensification is dictated by objective conditions and the entire path of development. There are no alternatives to it. Only in the intensive economy, which is developing on the latest scientific and technical basis, can serve as a reliable material base for improving the well-being of the workers and successfully carrying out the social tasks that are facing the society.<sup>1</sup> It is primarily as a result of the intensive type of economic growth that one increases the effectiveness of the utilization of material, labor and natural resources.

As for the third type of reproduction, which takes form during the period when socialism is actually growing into communism, the author's statements about its nature are problematic. It seems that those features which the author generalizes in this form of reproduction are only a more complete embodiment of the indicators of the second type. Thus already inherent in the second type are high rates of economic growth, a more sensitive orientation toward a higher standard of living for the workers, ecological balance, the formation of a consumption fund on a normative basis which is directed toward the satisfaction of the rational, reasonable demands, a higher economic return

from scientific and technical progress, and so forth. Without denying the possibility of the third type, one should apparently search for its features in those peculiarities of technical equipment, technology and the structure of production which are difficult to predict, and also in the public demands, the qualities of the worker and the hierarchy of his interests which will take form in the distant future, during the course of the next scientific and technical revolution and the formation of the social homogeneity of the society, and in the principally new qualitative characteristics of labor and consumption, and so forth.

The process of reproduction is the unity of the reproduction of productive forces and production relations. The effectiveness of public production depends on a correct combination of these aspects. The author is right in saying that "greater significance is attached to criteria which make it possible to reveal the urgent need and direction for improvement of socialist production relations in order to provide for further progress in the production of the social product" (p 81). It seems that this thesis is realized through improvement of the economic mechanism.

#### The Social Mechanism of Economic Growth

The book develops a system of points that elucidates the social mechanism of economic growth. Several aspects can be seen in K. I. Mikulskiy's approach to this problem. The first one is the reproduction aspect, which the author understands as "the scheme of interconnection and interaction of production and consumption" (p 35). Here the role of consumption is manifested both in the satisfaction of the needs that are related to the maintenance and multiplication of the capabilities of the work to work and in the material incentives. He expresses the idea not only of the useful augmentation, but also of a certain interreplaceability of accumulation and consumption as conditions for economic growth. At the same time he raises the question of maximization of the production potential of the individual as a result of consumption. The significance of the interreplaceability of accumulation and consumption is especially great for mobilizing the small-expenditure (noninvestment) factors in economic growth since the effective of the latter depends strongly on the stimulating role of consumption (pp 370-371).

Associated with this is the problem of the structure of the demand: a socially justified, sufficiently high proportion of demands which when satisfied increases man's capability for labor, and a low proportion of demands which narrow labor capabilities. Consequently it is necessary to consider the tasks of providing incentives for workers through wages in close connection with the problem of forming an efficient structure of demands on whose satisfaction labor income is spent. "...Controlling economic growth effectively," writes K. I. Mikulskiy, "is impossible if one concentrates efforts on controlling the behavior of man merely as a producer, leaving the formation of his behavior as a consumer to its own course" (p 39).

It would seem that the development of these points opens up additional possibilities of selecting an efficient strategy for socioeconomic development. Therefore it is correct to think about optimizing the accumulation and consumption as factors in economic growth in the interests of

and from the standpoint of objective limitations on effective utilization of consumption. Related to the latter circumstance is the danger of "overaccumulation" which is essentially not a contribution to economic growth, but a waste of public labor.

The second aspect of the social mechanism, the social-organizational aspect, which the author understands as "a system of principles, directions and forms of interaction of the society as a whole, social groups, collectives and individuals, which is based on a particular type of social relations and forms processes of social development, its directions, goals and rates" (p 346). The author analyzes the social motive forces of the socialist economy, its contradictions and ways of resolving them. From the practice of the last 2 decades the author draws the conclusion that the role of consumption as a factor in economic growth depends primarily on the conditions in which the consumer participates in distribution. Centralized measures for significantly increasing the incomes of practically all segments of workers in our country and in other socialist countries have not produced the proper impetus for the dynamics of the effectiveness of production and economic growth. The fact is that increasing wages was far from fully conditioned by the improvement of the individual and collective results of labor, and was frequently conducted automatically, irrespective of the labor activity of the workers. Taking experience into account, we are now discussing the question of making earnings more directly dependent on the quantity and quality of labor. Otherwise the increase in the consumption fund is not accompanied by the proper increase in its incentive role.

Therefore the analysis of the positive changes in the material incentive for the workers and their utilization for accelerating economic growth is interesting. The author takes note of the contradictory nature of the present situation: the material needs of the workers, as a rule, are increasing rapidly, but the system of material incentives which is now in effect is not working well. The reasons are diverse--the sometimes perfunctory nature of the incentive measures, the low level of material incentives, the bypassing of the system of incentives in favor of "equalizing," and the shortage of a number of goods and services. But it is not only this. The modern worker has developed ideas about acceptable labor expenditures, the equivalence of remuneration, and so forth. Consequently, material demands are growing but the possibilities of incentives are limited both by the aforementioned shortcomings and by the circumstances associated with the level of material support that has been reached, which cannot but be taken into account when evaluating the effectiveness of incentive measures.

One can agree with the author's opinion that it is necessary to increase the effectiveness of material incentives for labor, although here he has certain contradictions. Emphasizing the need for a link between wages and the final results as well as the growth of labor productivity, K. I. Mikulskiy, it seems, is wrong in saying that "differentiation of the incomes of the population, with the need for simultaneous utilization of material stimuli, does not go beyond the framework recognized by public opinion as justified and socially fair" (p 363). The author is apparently confusing the economic and social functions of incomes, wages and public consumption funds, which serve as a basis for satisfying the socially high-priority demands. Social justices



manifested primarily in that the differentiation of wages has fully reflected the differences in the workers' contribution to public production. Yet the author is right in asserting that with the reduction of the effectiveness of material incentives one most frequently also observes not an increase in other motives, but a general weakening of the interest in labor.

In relation to the problems of incentives the book also addresses the question of needs. Speaking about the purposive formation of efficient demands in a socialist society, the author states that "economic growth requires maintaining a level of development of demand which, on the one hand, would bring about a certain dissatisfaction on the part of the population with the level of covering demands that have been reached, which gives rise (when the economic mechanism is well arranged) to an increased labor contribution and, on the other hand, it must not be too high as compared to the possibilities of satisfying the given demands with the feasible rates of economic growth in the near future" (p 365).

### Rates of Economic Growth

The importance of this publication is indicated by the analysis of the problem of the rates of economic growth, which in recent years has not been sufficiently elucidated in domestic literature. The author objects to the opinion that the level of rates is losing its significance. Regarding the rates of economic growth as one of its major characteristics, the author assumes that increasing the absolute percentage increase as the level of economic development rises does not remove the need for sufficiently high relative indicators of growth. The book considers "criteria of the quality of rates": economic growth is the level of expenditures per 1 percent of increase in output; social results of the growth of an indicator of proportion of objects of consumption in the increased output of material production; the proportionality of growth, that is, the proximity to an optimal ratio between the rates of development of the branches and the sectors of the national economy; and the reproductivity of growth--the amount of increase (in monetary terms) of the consumer qualities of means of production which are at the disposal of the society (pp 126-127).

In principle one can agree with such a condition, but it seems that in order to be definite the author should take advantage of the concept of the optimal rate of economic growth, which corresponds to the maximum satisfaction of the demands of the members of a socialist society. Strictly speaking, the optimal rates of economic growth are the most economical and provide for proportionality of growth as well as the best ratio between consumption and accumulation in the national income. K. I. Mikulskiy does not deny this when he speaks, for example, about the maximum final national economic results. But he does not succeed constructively or completely in linking the concept of the quantity and quality of the rates of growth of the national income and the concept of optimal economic growth.

When discussing the tendencies toward retardation of economic growth, the author correctly assumes that an essential role here was played by the shortcomings in the economic mechanism. In his opinion, which is far from indisputable, under the current reproduction conditions improvement of the

methods of management will make it possible to achieve approximately 5 percent of the average annual increase in national income.

Other of the author's considerations regarding the problem of economic growth are also interesting: the comparison of the maximally possible, minimally admissible and adequate rates; the evaluation of the concept of slowing down the growth rates in light of modern experience; the discussion of the significance of comparisons with growth rates in capitalist countries in order to evaluate the mobilization of reserves in a socialist economy. In considering these questions too the concept of the optimal rate of economic growth would be extremely fruitful: in the end, individual aspects of this kind also comprise the internal characteristics of the dynamic optimum.

One should also include among the merits of the book the investigation of the position of the individual worker in expanded socialist reproduction. The author is right in emphasizing that the shortage of labor force is a consequence of the shortcomings in the existing economic mechanism. The demographic situation only reinforces this phenomenon, but it does not generate it.

K. I. Mikulskiy's book also considers other problems of economic growth. When discussing the concept of intensification of public production, the author quite correctly criticizes the unsubstantiated attempts to judge its course in terms of particular indicators of the utilization of live labor and production capital. With all of their significance, they still do not reflect the total effectiveness of the utilization of production resources, which also serves as a basis for measuring the effectiveness of public production at the rate of its intensification. Additionally the following assertion seems questionable and somewhat one-sided: "The goal and meaning of intensification at the macroeconomic level under socialism in the modern stage and in the foreseeable future consists, in the final analysis, in the creation of possibilities of changing the ratio between the accumulation fund and the consumption fund in favor of the latter or stabilizing or slowing up the reduction of the proportion of the consumption fund in the event that the demands of the society for accumulation are growing rapidly" (p 226). K. I. Mikulskiy assumes a priori that a reduction in the proportion of the consumption fund is a "poor" indicator of economic growth. But the real problem is an optimal ratio between consumption and accumulation in the national income, which is achieved--we emphasize once again--during the course of dynamic maximization of national well-being.

We are not satisfied by the alternative concept of intensification which K. I. Mikulskiy gives. "There is another understanding of intensification in which this concept serves to describe the process of the utilization of some material production process or material factor in production (labor force, implements and objects of labor)" (p 223). In the first place, such a definition leads to a confusion of concepts for the term "intensification" has already been used. In the second place, it does not rule out an unjustified approach to evaluating intensification of public production in terms of particular indicators of effectiveness. In the third place, in this sense the evaluation of intensification coincides simply with indicators of the

productivity of public labor, output-capital ratio and the material-intensiveness of the products.

#### Internationalization of Economic Growth

Let us note, finally, such a negative feature of the book as the analysis of the role of external factors in economic growth. Up to this point in domestic economic literature we have not overcome the self-sufficient approach to expanded reproduction, whereby it is regarded within the boundaries of an individual country. Because of the development of world economic ties with our country and other socialist countries, and especially socialist economic integration, this approach limits our understanding of the totality of factors that form the rates and proportions of reproduction and the possibilities of economic science in improving practice. The political economic analysis of the process of internationalization of public production and the world system of socialism, the typical features of the socialist international reproduction system, the ways of bringing national economies into international production ties, and so forth contributes to overcoming this shortcoming. At the same time attention is drawn to the content-filled discussion of the modern practice of foreign economic relations of the socialist countries and the influence of international division of labor on economic growth.

When describing the stages in the development of foreign economic relations of the countries of the socialist community K. I. Mikulskiy justifiably emphasizes that deepening of socialist economic integration contributes to regrouping the factors in economic growth in favor of intensive ones and achieving a qualitatively higher level of effectiveness of management. Thus socialist economic integration is one of the basic factors in the changeover to a qualitatively higher intensive type of expanded reproduction, which is the main task of the socioeconomic development of socialist countries in the modern stage and in the foreseeable future. We quite agree with the author's assertion that the "rates of further deepening of socialist economic integration, like the effectiveness of integration measures, depends to a decisive degree on how much they correspond to the long-range and current national interests" (p 325).

A fruitful discussion with the author of the book could be continued--the book's value is certainly not in that it presents unquestionable truths, but in that it provides a profound and creative investigation of the crucial problems of the theory and practice of developed socialism.

#### FOOTNOTE

1. See Gorbachev, M. S., "Zhivoye tvorchestvo naroda" [The Live Creativity of the People], Moscow, Politizdat, 1984, p 19.

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## CONTROL OF LABOR ACTIVITY DISCUSSED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 8, Aug 85 pp 209-213

[Article by L. I. Lekhtsiyer, candidate of economic sciences, Department of Organization and Control of Public Production of the Moscow State University imeni M. V. Lomonosov, and G. L. Podvoyskiy, candidate of economic sciences, chief of the editorial staff for literature on national economic planning and management of the "Ekonomika" publishing house: "Labor Activity of the Workers: How To Control It?"]

[Text] Increasing the labor and social activity of the workers is of decisive significance in improving the system of management of the economy. Without taking advantage of this key reserve it is impossible to accelerate the changeover of the economic to the intensive path of development. In a report at the all-union scientific and practical symposium on problems of increasing the labor activity of the workers, which took place in Mytishchi, Doctor of Economic Sciences, Professor of Moscow State University G. Kh. Popov noted that the experience accumulated in the country and its theoretical interpretation provide a basis for singling out three main spheres for increasing the activity of the workers: economic, social and administrative. In the most general form the system of increasing the activity of workers and socialist production includes incentives and responsibility, incentives and coercion. Participants in the symposium basically considered the economic part of the system of increasing activity, which can be presented in the form of two main blocks: the block of levers of influence and the block of factors that determine the effectiveness of the economic levers of influence and their real force.

The economic levers can be combined into three groups:

influence along the line of offering a work position and its availability;

influence along the line of payment for labor, including wages as such and various kinds of bonus systems;

influence along the line of various kinds of payments and benefits from public consumption funds.



Influence along the line of the work position. Academician A. I. Anchishkin and other participants in the symposium noted that the range of issues related to increasing labor activity includes also problems of efficient utilization of labor resources and the increased prestige of the work positions. Recently the shortage of labor resources has had a negative influence on the economic mechanism: it weakens the effect of material incentives. Levers of administrative influence also become less effective under these conditions.

The shortage of labor resources is dangerous in and of itself: planned assignments are not being fulfilled, product quality is deteriorating, construction projects are not being completed on time, school classes are not being provided with teachers, hospitals are not being given medical personnel, and so forth. An even more dangerous consequence is that the bad worker becomes valuable, and he must be "retained." But he can only be "retained" materially: he must be given more (than he deserves) earnings, be given an apartment or a vacation pass earlier, and so forth.

As a result, the economic mechanism is distorted, even a well-planned system of material incentives is weakened, and levers of administrative coercion lose their meaning since the extreme administrative measure--firing--turns out to be ineffective. The shortage of workers is the initial link in the system of activization. Without changing the situation here we will not be able to "turn on" other levers.

The shortage of labor resources can be reduced by increasing the role and significance of the work positions. Work is being done in this area--this includes certification of the work positions, raising the level of their supply, and so forth. The experience of the Dnepropetrovsk Combine Plant for increasing the effectiveness of the utilization of production capacities on the basis of certification of work positions and the streamlining of them has now become widely known throughout the union. At the same time it must be noted that it is not being sufficiently utilized. Many ministries and departments instead of increasing the load on existing productions are oriented mainly toward introducing new capacities and additional work positions.

When workers are released as a result of combining occupations, expanding the service zones, mechanizing and automating production and other methods of increasing labor productivity there arises the problem of placing the workers who have been released. It is necessary to have guaranteed work positions for this. Consequently, it is necessary to remove a certain part of the released wage fund from the given enterprise--this will enable the state to place the released workers in jobs. That part of the fund which remains with the enterprise will be an incentive for further reduction of a number of workers and will go for incentives for the rest to use efficient devices and methods of labor.

Discussing influence along the line of wages, the main speaker and other participants in the discussion--doctors of economic sciences G. K. Gubernaya (Institute of Soviet Trade, Donetsk), B. V. Rakitskiy (TsEMI of the USSR Academy of Sciences, Moscow), Ye. V. Mayminas (MGU), G. A. Lakhtin (Institute of Economics of the USSR Academy of Sciences, Moscow), deputy general director

of the Volga Turbine Plant, Candidate of Economic Sciences V. T. Trofimov and others--noted the need to improve the rate systems for wages.

How are wage rate earnings determined today? This depends on the importance of the branch, the category of the enterprise, the rank of the worker and so forth, but it is not very much related to the concrete results of labor. The qualification category tells not about the work that has been performed, but about that which could potentially be done. And such criteria as the branch to which the enterprise belongs have nothing at all to do with this--neither actually nor potentially.

Thus the role of the active lever in increasing labor productivity is not fulfilled by the wage rate earnings. Moreover it frequently places in an unequal position those workers who are performing the same job in various branches and at various enterprises. The wage rate earnings are always paid: all the worker has to do is come to work and do something. "This is payment not for results, but for coming to work," emphasized the speakers at the symposium.

The existing system of payment for labor places limits on the growth of earnings for those who want to work better and their interest in increasing productivity rapidly declines. But at the same time it does not sufficiently penalize ineffective workers. Therefore a reform of the system of payment for labor should be the first part of the restructuring of the mechanism for activization. Restructuring the payment for the labor of all workers is an exceptionally complicated matter. But if we want to essentially accelerate the rates of economic growth there is no other path.

One of the goals of the restructuring is the introduction of simple and clear systems of payment and bonuses. Today they are so complicated that not only the worker, but even the scientist cannot remember all the innumerable conditions, limitations, factors and so forth, and therefore many levers remain less effective. As a result the immense machine takes into account, norms, counts, and calculates in order to determine that a particular worker should be paid not 13 rubles 3 kopecks, but 13 rubles 7 kopecks. Participants in the symposium came to the conclusion that the main task is to strictly coordinate the payment with the results of the labor so that each ruble that is paid is backed up by an increase in labor productivity. If this goal is reached there is no need for any limitations on the payment for labor.

Improvement of the economic mechanism for making the workers more active is also related to the expansion of the independence of the production enterprises and associations. For example, the labor activity of engineering and technical personnel influences most directly the acceleration of scientific and technical progress. An effective lever for increasing this should be a more flexible system of payment for labor. The large-scale economic experiment which is now under way and also the economic experiment for improving the wages of designers and technologists which is being conducted in Leningrad should help to test the mechanism for increasing the labor activity of the workers.

In the opinion of participants in the symposium, the practicality and effectiveness of the mechanism for activization are determined to a considerable degree by the functioning of the entire system of distribution relations. Therefore during development one should take into account the prices for the goods and services, the influence of nonlabor incomes, and so forth. Participants in the symposium doctors of economic sciences Ye. V. Meyminas, B. V. Rakitskiy and others noted how important it is to have a comprehensive solution to the problem of incentives and to find a correct ratio between moral and material incentives.

The third channel of influence is public consumption funds. Under socialism they play a multifaceted role. At the symposium they considered only one of their aspects--motivating and increasing labor activity. Payments from the consumption funds produce confidence in the future in the event of illness or inability to work, they guarantee the right to housing and education, and they create an overall situation of stability. Without taking these into account one cannot create any system of activization. Indeed, what point would there be in a smooth system of bonuses at a given plant if the entire sum of these potential bonuses are covered--and are covered many times over--by the possibility of obtaining an apartment free of charge 2 years sooner in another organization?

The influence of public funds must be taken into account when creating a unified system for making the workers more active. Otherwise, limited only to wages, it will not be expedient enough. Both wages and bonuses take on a different appearance in light of the entire sum of payments from public funds.

As was noted at the symposium, two outstanding initiatives provide deep evidence of the fact that it is time to change over to new systems for making the workers more active. These are the Shchekino system and the brigade contract, which were discovered by the practice of management and approved and supported by the party. These initiatives have become a mass movement and already contain a considerable number of elements of the system of activization. Moreover, the experiments in Shchekino and Kaluga showed the need to change over from the introduction of individual experimental blocks to a completely new system of activization which is coordinated in all of its components. The experiment cannot drag on over decades because the oases in the economy cannot exist for very long. Either they will be absorbed by the remaining unchanged system of organization and management or they will be retained under special conditions and by such special methods that there would be no way in which they could be considered exemplary even if this is what they were said to be.

In the opinion of participants in the symposium G. Ya. Rakitskaya (VNISI GKNT and USSR Academy of Sciences and Yu. N. Bronnikov (MGU) as well as Ye. G. Yasin (TsEMI), brigade forms could be developed more successfully if the experience that has been accumulated were generalized better both theoretically and practically. At the same time it is important to see two major dangers in the development of the method. The first is formalism, which is manifested in the desire of certain management workers "for the report" to include the largest possible percentage of workers in brigades without observing the necessary conditions in so doing. The second is the

underestimation of the need to improve the entire economic mechanism, which today to a certain degree impedes further introduction of the brigade form and other initiatives.

The breaking of the "psychological barrier" is of great significance in the dissemination of brigade organization of labor at enterprises and in production associations. Many participants in the discussion correctly took note of the existence of certain limits of economic influence as such which must be taken into account. In increasing the labor activity the totality of economic and ideological forms and methods of influence is important. But one must not underestimate economic levers since economic interests are most closely related to all the other interests of the worker.

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#### READER DESCRIBES EKO EXPERIENCE

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 8, Aug 85 pp 214-215

[Article by Oleg Germash, foreman of the Atomash Association (Volgadonsk): "We All Learned a Little, of Something and Somehow..."]

[Text] I consider the magazine to be my own because I have been reading it since 1978. In 1983 I completed studies at the Institute of Management imeni S. Ordzhonikidze in Moscow. I acquired the specialty of engineer-economist for organizing production management in the machine-building industry.

Strange as it may be, no more than 10 percent of the students in the institute read EKO regularly. This was explained during the annual public political certifications which were conducted in various groups and in various courses. In my group by the end of the studies we managed to convince approximately one-third of the students not only to read, but to prepare for classes or to write course projects with the help of the magazine. The time of being a student has passed, and that which satisfied me in the magazine can no longer do so.

In the second course I became involved in problems of intraproduction cost accounting [khozraschet]: I wrote term papers on this subject and also wrote and defended my diploma project "The Organization of Control of the Process of Introducing Cost Accounting in the Atomash Production Association." Unfortunately, the magazine did not help me much in this. And there was almost no literature on these problems. To what degree had cost accounting been introduced in the country, at leading enterprises and in associations, how does it work, how did they arrange the reporting necessary for cost accounting, how is computer equipment used for this purpose, who is in charge of this work at the enterprises? There are many other questions whose answers are extremely difficult to find in economic literature.

There are even greater blank spots in our knowledge of how production is controlled in industrially developed countries. For example, having taken the course "Foreign Experience in Management," we were unable to learn anything concrete about the organization of management at the level of enterprises and shops. We knew absolutely nothing about the norms and procedures that enabled the bank to influence the development of production.

In brief, once one gets outside the walls of the VUZ one feels that it is necessary to learn a good deal more. And I should like for EKO to help in this more systematically than it does not.

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## EFFECTS OF POOR MANAGER DISCUSSED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 8, Aug 85 pp 215-216

[Article by Arnold Palant, chief of the programming bureau (Sverdlovsk): "A Weak Manager Bothers No One"]

[Text] Your magazine considers mainly large problems which interest managers of the highest level at the enterprises--directors, head engineers and their deputies. Well, what about foremen, shop and chiefs of shops, bureaus and sectors in the divisions? They have smaller, but no less complicated problems and a multitude of duties. And they have practically no rights at all. Attempts are rarely made to expand their rights or to change anything in the style of production life.

I am speaking about my own experience. In 1980 I developed an experimental program for using a computer for calculating the output norms and analyzing the results of the work by the workers in my bureau. The program was approved by the technical council of the division and it was applied in practice. What did we find out? The productivity of the best engineers turned out to be 2-3 times greater than that of the worst ones! But both of them receive approximately the same amount of pay--140-160 rubles a month plus bonuses. One can give a slight incentive for the best ones by regulating the amounts of the bonuses. But attempts to do this immediately met with resistance from managers of the division, and the plant service for labor and wages did not object in principle but it put the revolution of the issue off for consideration by managers of the division.

Incidentally, even if they had approved, it would have been impossible to accomplish by relying only on the bonus? After all, today the bonus depends not on the concrete achievements of a concrete individual, but on the fulfillment of the plant plan. As a result, the person who does nothing receives it just as well as the conscientious worker does. It turned out that no one wants to enter into conflicts with the people who are not working hard enough. Thus the point of bonuses from the management standpoint is not clear. Personally I think that in general they are unnecessary and we should regulate work directly through the amount of the salary.

And one more observation. When returning from vacation it takes me 2-3 weeks to put everything back in order in the bureau: I correct the mistakes of the worker who has replaced me, figure out why the deadlines were not met for one job or another, and try to take care of all that has been neglected. For I am paid not for my work, but for my job. Is it not for this reason that first in one place and then in another professionally weak workers are energetically making their way to management positions? They deliberately stay away from which requires excessive effort for them, but they do everything they can to demand this kind of effort from their subordinates. And if the latter are successful in carrying out their duties, practically nobody is bothered by the occupational unsuitability of the weak manager.... What must be done in order for this to bother people!

From the editors. The solution to the problems that interest the author of this letter was envisioned in the conditions of two experiments: in Leningrad--for improving the organization and payment for the labor of designers and technologists, and in Novosibirsk--for applying the collective contract instructions, shops and other structural subdivisions of enterprises.

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## EVILS OF ALCOHOL RECALLED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 8, Aug 85 p 216

[Article by A. M. Abdullayev, neuropathologist (Tashkent): "Crazy Man, Stop!"]

[Text] The purpose of the activity of each individual (like the purpose of your magazine) is to multiply the spiritual and material values of the society. But the reverse side of this activity, the insane waste of value, is the most widespread kind of narcomania--drunkenness and alcoholism. Alcoholic beverages are sometimes sold right in the vicinity of the training institutions and work places. There is no shortage of these products. I personally would be willing to take out a loan so that the money from this could be used fight against drunkenness. How do we put a stop to this insanity? For as long as it exists we will not solve any problems, including economic ones!

From the editors. The magazine has prepared for publication a selection of materials which give an economic and social analysis of this phenomenon. The materials are to be published in one of the next issues.

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## TYUMEN EKO CLUB CELEBRATES BIRTHDAY

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 8, Aug 85 pp 217-219

[Article by G. L. Chudnovskiy, candidate of economic sciences, scientific secretary of the EKO Club (Tyumen): "The Tyumen EKO Club Is Five Years Old"]

[Text] According to the initial intention, the club of economic problems was created only to discuss collections of the development of the Western Siberian Petroleum and Gas Complex. And this orientation was justified. The extraction of hydrocarbon raw material largely determines the economic life of Tyumen Oblast.

At one of the first meetings of the club problems of the formation, retention and utilization of labor resources were subjected to serious analysis. The prolonged solution to social problems, in spite of the beneficial conditions for wages, caused undesirable flows of migrants into other regions in the country. The shortage of personnel decreased somewhat as a result of the utilization of the expedition-watch method of work. By what means can one stop the undesirable processes in the formation of labor resources and how does one accelerate the development of the social infrastructure of the petroleum and gas complex? These and other questions which were considered at the meeting of the EKO Club went into a note with recommendations which was sent to the oblast agencies and the interdepartmental commission of the USSR Gosplan.

Everyone remembered the club meeting at which they discussed questions of the development of the region's transportation system. The result of the discussion was increased attention on the part of the involved organizations to the natural "roads"--the small rivers with which it was possible to deliver cargo directly to the fields. It turned out that the small river fleet under departmental jurisdiction was not prepared for regular and mass trips. Moreover there were few docks and other port structures, and work was being done slowly for deepening and expanding the channels of small rivers. Attention to this problem contributed to its gradual solution. In 1984 more than 3 million tons of cargo were transported along such rivers, and more and more ships are being sent by enterprises of the Ministry of the River Fleet.

Of the initiative of club members a crucial problem is being solved--centralized repair of automotive transportation and other equipment at the manufacturing plants. This kind of organization of repair will make it possible to save tens of millions of rubles.

There is a multitude of problems in the development of the Western Siberian Petroleum and Gas Complex. Many meetings of the EKO Club have been devoted to them. But the interests of the club members--regular readers of the magazine--are, naturally, broader. For example, we invited from Leningrad a constant contributor to EKO, G. A. Kulagin, who shared his ideas about the introduction of the achievements of science and technology. The leading professors of Tyumen Medical Institute and workers in the mining health division participated in the club meeting in which they discussed the problem, and at the same time there was the section in EKO entitled "Health--An Economic Category." The directors and head engineers of the enterprises in the city were keenly interested in the possibilities of scientific management consenting, which was discussed at one of the meetings with the participation of a member of the EKO editorial board, V. B. Rechin. The meeting with the head architect of Tyumen, V. V. Anisimov, evoked a great deal of interest. And nonstandard building up of the "petroleum capital" is impeded by many things, particularly the large number of plans (there are more than 80 of them). Therefore individual settlements and microrayons grow up, where the construction of schools, polyclinics and movie theaters is considerably in arrears. Participants in this meeting were interested in discussing the comprehensive building up of the city.

The board of the Tyumen club consists of 15 people who represent the scientific and economic community, production, branch science and the VUZes. The board "keeps track" of guests in Tyumen and tries to organize their meetings with members of the club. Thus in July 1984 we managed to invite Professor Z. I. Tereshchenko, who was traveling through Tyumen. There were endless questions for him: about the training of managers in the United States, the role of computers in making management decisions, evaluations of the modern level of management in the country, the age limits for the effectiveness limit of a manager, and so forth. We did not stay within the time limits.

The club board relies on 25 of the most active permanent members. Each of them has the right to bring up for discussion those issues which he considers crucial and to invite to a regular meeting specialists who are not members of the club. We hold planned meetings approximately once every month and a half. Each member of the club 2-3 weeks before the meeting receives a personal invitation with a brief discussion of the issues being brought up for discussion. Ten days after the meeting all members of the club, including those who did not come to the meeting, receive a brief transcript which is compiled on the basis of a tape recording.

The atmosphere is cosy during the meeting. A samovar of tea, sandwiches, and mineral water contribute to this as does the psychological attitude of the club members who have come to speak candidly about crucial problems with people who can attentively listen, understand and give advice.

The director of the oblast House of Technical Equipment took on the difficult duties of the host and organizer, who offers premises for our meetings and even small monetary contributions.

The club has established fairly close ties with local television, on whose order we organize, for example, a cycle of programs on the economic experiment in industry--on expanding the rights of associations and enterprises in planning and economic activity. On television we retained the club form of conversation and the discussion atmosphere.

Celebrating the fifth anniversary of the EKO Club we can say that almost all the forms of our work have been justified: the printed word, television programs and all kinds of job meetings, and to no less a degree the young people's gatherings in the group of like thinkers who discussed ways of developing the economy of the oblast and of the entire country. They are also necessary and useful. It would seem that for other clubs as well as diversity of forms of work is a guarantee of success.

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CERTIFICATION OF WORKERS SATIRIZED

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 8, Aug 85 pp 220-221

[Article by D. Kalyuzhnyy (Moscow): "How Are Things, Ivanov?"]

[Text] "Well, Ivanov, how are things?"

"Thank you very much."

"So, everything is all right, no?"

"Thank you very much."

"Is everything all right at home? Your wife is not sick? How are your morals, har har, Ivanov?"

"Thank you very much."

"Well, yes. Well so, Ivanov, tell me, how is your work? Do you like your work? Or not? Tell me how everything is."

"Thank you very much."

"Hmmm, hmmm. Well, yes, that's good. Does anybody have any questions for Ivanov? Nobody? Then tell us, Ivanov, er, well, yes. Tell us, do you like your collective?"

"Thank you very much."

"And the management?"

"Normalek!"

"Thank you ver.... Shh, hell. That is good.... Are there any other questions? Why are you silent? Who is yawning back there? I ask, who is yawning! Aah, Ivan Ivanych?... Excuse me, Ivan Ivanych, we are speaking with Ivanov, Ivan Ivanych. He likes the style of management, Ivan Ivanych... Eh,

Ivanov! Do you have any complaints against Ivan Ivanych? Ah, answer directly and honestly in front of Ivan Ivanych himself."

"Thank you very much."

"Hmmm, hmmm.... I think, comrades, that Ivanov is quite, as it were.... He answered all the questions satisfactorily. Let us write down that he is past his certification. Does the commission have any objections? Are there no objections, I ask? No objections. Let us write: Ivanov is qualified for the position he holds as head engineer. That is all, Ivanov, you may go."

"Thank you very much...."

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Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 8, Aug 85 pp 221-222

[Article by S. Pugachev: "Aphorisms, Foremen, Numbskulls"]

[Text] Protect personnel. Create conditions so that they leave only at their own request.

Protect your authority. If you do not know the answer to a question, sent the person who is asking it on further.

Fight against tardiness. By your personal example show the harm it can do to production.

Wake your subordinates up if they have gone to sleep while listening to you. Be magnanimous--forgive your subordinates their mistakes.

Be a gentleman. When assigning a woman to work overtime, find out whether or not her husband can stay at home during the evening with the children.

Take risks! Try out all forms of material incentives on yourself.

Be fair, do not hold it against a subordinate who has offended you.

Be candid--declare directly your agreement with the management.

Develop a sense of humor--convey unpleasantness to others with a smile.

In conversations with the management do not praise any of your subordinates too frequently: they may put him in your position.

Promote capable subordinates, but only to other shops.

Make sure that people think you have a future. Then they will be more tolerant of you in the present.

If they have taken away your bonus do not explain to everybody that this was unfair. Perhaps the directors, the public organizations and the central press would be enough.

Do not be irreplaceable--teach your subordinates to do your work.

Do not become offended at a joke. It is better to put the joker on report.

Do not be late for a conference--you will have to sit in the first rows.

Do not shy away from trivia--large amounts of unpleasantness grow out of them.

Do not repeat your orders--your subordinates will decide that you have a poor memory.

Devote special attention to the reception of youth, for otherwise who will you take for agricultural work?

Watch your language. Remember that in addition to "thus" and "as it were" it should also include other expressions.

Keep your firefighting supplies in order. After all, so many things have to be taken care of as if there were a fire!

Be able to listen. Never interrupt a person who is praising you.

Be able to explain to your subordinates that you are responsible for a lion's share of their successes.

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